



ENVIRONMENTAL ASSESSMENT BOARD

VOLUME:

351

DATE:

Thursday, February 6, 1992



BEFORE:

A. KOVEN

Chairman

E. MARTEL

Member

FOR HEARING UPDATES CALL (COLLECT CALLS ACCEPTED) (416)963-1249



(416) 482-3277





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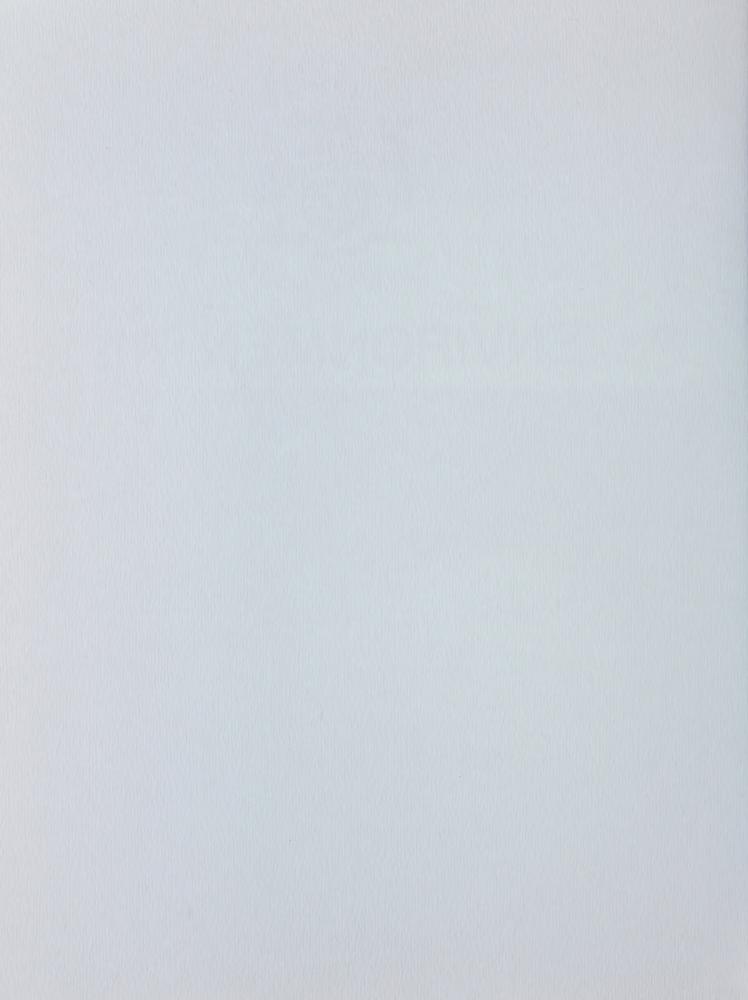
E. MARTEL

Member

FOR HEARING UPDATES CALL (COLLECT CALLS ACCEPTED) (416)963-1249



(416) 482-3277



HEARING ON THE PROPOSAL BY THE MINISTRY OF NATURAL RESOURCES FOR A CLASS ENVIRONMENTAL ASSESSMENT FOR TIMBER MANAGEMENT ON CROWN LANDS IN ONTARIO

IN THE MATTER of the Environmental Assessment Act, R.S.O. 1980, c.140;

- and -

IN THE MATTER of the Class Environmental Assessment for Timber Management on Crown Lands in Ontario;

- and -

IN THE MATTER of a Notice by The Honourable Jim Bradley, Minister of the Environment, requiring the Environmental Assessment Board to hold a hearing with respect to a Class Environmental Assessment (No. NR-AA-30) of an undertaking by the Ministry of Natural Resources for the activity of Timber Management on Crown Lands in Ontario.

Hearing held at the offices of the Ontario
Highway Transport Board, Britannica Building,
151 Bloor Street West, 10th Floor, Toronto,
Ontario, on Thursday, February 6th, 1992,
commencing at 9:00 a.m.

VOLUME 351

BEFORE:

MRS. ANNE KOVEN
MR. ELIE MARTEL

Chairman Member Digitized by the Internet Archive in 2023 with funding from University of Toronto

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MR.	M. BAEDER)	and WINDIGO TRIBAL COUNCIL
MS.	M. SWENARCHUK)	FORESTS FOR TOMORROW
	R. LINDGREN	í	
		,	
MR.	D. COLBORNE)	GRAND COUNCIL TREATY #3
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2094	Hand drawn description of Coalition's 10 per cent rule re term and condition 160.	61148
2095	Document entitled Using Forest Ecosystem Classifications to Facilitate Habitat Inventory, authors Dean Phoenix and Jerry Racey.	61173
2096	Document entitled Evaluation of Wildlife Species of the Boreal Forest and Evaluation of Wildlife Species of the Great Lakes/St. Lawrence Forest, authored by OFA consisting of 17 pages.	е



1	Upon commencing at 9:10 a.m.
2	MADAM CHAIR: Hello. Please be seated.
3	TERRY QUINNEY; Resumed.
4	MADAM CHAIR: Good morning, Dr. Quinney.
5	THE WITNESS: Good morning.
6	MADAM CHAIR: Good morning, Mr. Lindgren.
7	MR. LINDGREN: Good morning, Madam Chair,
8	good morning, Mr. Martel.
9	Thank you, Madam Chair.
10	CONTINUED CROSS-EXAMINATION BY MR. LINDGREN:
11	Q. Dr. Quinney, if I can I would like to
12	briefly return to our conversation that we had
13	yesterday afternoon.
14	You might recall that I asked you if
15	maintaining biodiversity should be the paramount or
16	overriding land use objective for forest managers and
17	you said this is just one of the objectives.
18	Do you recall that testimony?
19	A. Yes.
20	Q. I would like to ask you a couple of
21	brief follow-up questions on that.
22	First of all, can we agree that a forest
23	manager might have a number of different goals, such as
24	producing so much wood or producing so much moose, if
25	those goals must achieved in a way that maintains

1	biological diversity?
2	A. In the way I've described it in my
3	testimony, yes.
4	Q. In other words, can we agree that
5	resource extraction or resource production goals are
6	important, but subordinate to the overall objective of
7	maintaining biological diversity?
8	A. As I stated in my evidence, those
9	activities, timber management activities should not
L 0	result in the loss of species, as an example.
11	Q. So your answer to my question is yes?
.2	A. My answer is that those activities
L3	should not result in the loss of species or result in
L 4	populations levels lower than viable numbers.
15	Q. This is an important point, Dr.
16	Quinney. I would like a yes or a no and then you can
L7	explain it any way you want.
18	MR. O'LEARY: Madam Chair, that's not an
19	appropriate comment. The witness is entitled to answer
20	the question whichever way he likes, not in the manner
21	which Mr. Lindgren would like.
22	MR. LINDGREN: Madam Chair, I am entitled
23	to insist upon a yes or no and he can qualify it or
24	explain it any way he wants.

Q. My question is simply this, can we

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1 agree that resource extraction or production goals are subordinate to the overall objective of maintaining 2 3 biological diversity? Yes or no? A. Yes, in the manner that I have 4 described my evidence yesterday. 5 6 Okay, thank you. Now, yesterday I also asked you whether timber management activities 7 which reduce biological diversity should be approved or 8 9 undertaken, and you said that you didn't support timber 10 management activities that would result in the loss of 11 a species, but you also said that the answer to that 12 question also depends on the time frame, the scale that we are talking about? 13 14 Α. Yes. 15 I want to be very clear on the 16 circumstances under which the Coalition would support timber management activities that reduce biological 17 18 diversity. 19 So my question to you is simply this, is any loss or reduction of biological diversity 20 acceptable in your view or in the Coalition's view? 21 Sorry, could you repeat the question, 22 23 please? Is any loss or reduction of 24 Q. biological diversity acceptable in your view or in the 25

1	Coalition's view?
2	A. Reduction in certain elements of
3	biodiversity could be acceptable in some circumstances
4	and let me give you an example.
5	If your objective was to, for example,
6	increase the population numbers of a particular warbler
7	species, say a black and white warbler, through habitat
8	manipulation. In doing so what in creating better
9	habitat for the black and white warbler, that specific
10	species, you may actually decrease the numbers of
11	another warbler species simply because the habitat
12	requirements, particularly optimum habitat requirements
13	are going to differ from species to species.
14	Q. Now, are you
15	A. The point is, however, you can
16	increase the numbers of one species without causing the
17	extinction of another.
18	Q. I take it in your answer you are
19	referring to reductions in stand level diversity?
20	A. In the example I just gave I was
21	giving an example of species diversity.
22	Q. But you are talking about at the
23	stand level?
24	A. Yes.
25	MR. MARTEL: Dr. Quinney, I want to ask a

1 question because I'm not sure where this is going. 2 Do you think it is possible to do all the 3 things that are done in forestry, harvesting in an area, that it is possible to prevent any type of reduction of biodiversity in a specific area? 5 6 Is it humanly possible? For example, if 7 you have a clearcut, some of the little species are 8 going to move next door. Your diversity in that 9 specific area, I presume, would be reduced. 10 THE WITNESS: Yes. 11 MR. MARTEL: Temporarily. 12 THE WITNESS: Yes. 13 MR. MARTEL: Is it possible to do anything in the forest that wouldn't reduce some of the 14 15 diversity temporarily in a given area? THE WITNESS: No, it's not. 16 MR. LINDGREN: That's precisely the point 17 I want to establish, Mr. Martel. 18 Q. In your view, Dr. Quinney, reductions 19 in biological diversity are acceptable if they are 20 short term and if they are confined to the stand level? 21 They are acceptable if at the forest 22 23 level we don't lose species. 24 0. Okay, thank you. I would like to turn to the issue of ecological land classification

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1	systems and throughout your evidence you were referring
2	to FECs and you said that they would be an appropriate
3	surrogate for assessing biological diversity.
4	A. Mm-hmm.
5	Q. Can we agree that the FECs offer a
6	good starting point but they need to be modified and
7	improved in order to serve this purpose?
8	A. To serve which purpose?
9	Q. Assessing biological diversity and
. 0	being used for the purposes of landscape management for
.1	piodiversity?
. 2	A. The FEC system can serve a very
. 3	important and practical role with reference to
. 4	management of biodiversity, yes. Can it be
.5	Q. Well, there are certain deficiencies
.6	with the FEC system right now, correct?
.7	A. Would you like to give me an example?
.8	Q. Well, let's turn to an exhibit that
L9	you filed yesterday which illustrates some of those
20	deficiencies. Exhibit 2089 which contains the Claren,
21	Euler and Baker paper entitled Wildlife Habitat
22	Management in Ontario from Policy to Practice.
23	A. Yes.
24	Q. Can you turn to page 7 of that
25	document?

1		A. Yes.
2		Q. Under the heading Ecological Land
3	Classification	n and Habitat Inventory.
4		A. Sorry. Yes.
5		MADAM CHAIR: Did you say page 9, Mr.
6	Lindgren?	
7		MR. LINDGREN: Page 7.
8		MADAM CHAIR: Seven.
9		MR. LINDGREN: Q. The first sentence on
10	the page, Dr.	Quinney, reads:
11		"The first requisite for planning to
12		maintain biodiversity through the
13		maintenance of a supply of ecosystems is
14		the development and mapping of an
15		ecologically defined landscape
16		classification system at scales relative
17		to wildlife"
18		Stopping right there. I take it you
19	would agree w	ith that?
20		A. Yes, I would.
21		Q. The paragraph goes on to discuss the
22	FRI inventory	, and partway through the paragraph we see
23	that:	
24		"FRI lacks information about
25		characteristics such as understory

1	vegetation that are important to
2	predicting future wildlife habitat. Of
3	more importance, however, is the lack of
4	any way to aggregate stands and
5	to larger units on a basis reflecting
6	ecological processes."
7	Do you agree with that assessment?
8	A. "Of more importance, however, is the
9	lack of any way through the FRI to
10	aggregate stands into larger units on a
11	basis reflecting ecological processes."
12	I would require additional information
13	from the authors with reference to the scale at which
14	they are referring to ecological processes.
15	Q. I take it then, Dr. Quinney, you are
16	not in a position to agree or disagree with that
17	assessment at this point in time?
18	A. Yes, that's correct.
19	Q. Can we move on to the next paragraph
20	where the authors discuss the federal ecological land
21	classification system.
22	Madam Chair, for the record I can
23	indicate that this is a reference to the document
24	entitled Ecoregions of Ontario which we filed as
25	Exhibit 1715.

1		Q. Partway through that paragraph, the
2	second last se	entence, Dr. Quinney, we see that the
3	authors believ	ve that:
4		"The ELC system allows full integration
5		of information from the lowest levels of
6		the classification up to the higher
7		levels and, thus, allows a description of
8		wildlife habitat at various scales
9		appropriate to the size of the species in
.0		question. "
.1		Stopping right there. Do you agree with
.2	that assessmen	nt?
.3		A. Yes.
. 4		Q. The authors go on to indicate that:
.5		"The ELC also shows good potential to
.6		provide a common base for planning and
.7		communication between foresters and
.8		biologist."
.9		Do you agree with that?
20		A. Yes.
?1		Q. I take it that you are familiar with
22	the document	Ecoregions of Ontario? You have read it?
23		A. Some time ago, yes.
24		Q. Then finally, the authors discuss the
!5	FEC system in	the third paragraph on page 7 and in the

1	last sentence	in the third paragraph the authors
2	indicate:	
3		"For FEC to be useful and predicting the
4		quality of habitat for a species that
5		require successional stages other than
6		mature forest the system must be expanded
7		to include patterns of succession."
8		Do you agree?
9		A. I agree with that and, in fact, I
10	point that out	in my witness statement.
11		Q. The authors in the next paragraph
12	write that:	
13		"Other developments will also be
14		necessary before management approaches
15		based on FECs can be implemented
16		provincially. FECs must be expanded to
17		areas that are not prensently covered and
18		techniques for mapping FEC units must be
19		more fully developed. Research will be
20		necessary to address the assumption that
21		succession after timber harvesting
22		produces the same vegetation
23		characteristics and ecosystem processes
24		as succession after natural
25		disturbances."

1	Do you agree with that?
2	A. There are several statements made in
3	that paragraph. I agree with the statement that FECs
4	must be expanded to areas that are not presently
5	covered.
6	I would require additional information
7	before I could make a statement regarding "other
8	developments will be necessary."
9	With reference to the research, I would
.0	certainly, as I point out in my witness statement, like
.1	to see in parallel research conducted while the FEC
.2	system is being expanded to areas presently covered. I
.3	would like to see research in parallel done.
.4	Q. On the issue of expanding FECs, I
.5	take it that we can agree that FECs should be developed
.6	for all of the regions within the area of the
.7	undertaking?
.8	A. Yes.
.9	Q. Yes?
20	A. Yes.
21	Q. And should also be expanded to
22	include areas such as non-forested areas that are
23	currently not included in FECs?
24	A. Well, in terms of these hearings, it
E	would be my eninion that lands subject to timber

1	management act	tivities should receive the priority in
2	terms of expan	nding FECs system.
3		Q. Do you have a copy of Exhibit 1714,
4	Dr. Quinney,	which is the ESSA report entitled A Plan
5	of Research in	nto the Effects of Timber Management on
6	Wildlife?	
7		A. Yes. Could you give me the date on
8	that one? That	at's Exhibit 1714?
9		Q. That's right. January 29th, 1991.
10		A. Yes. Yes, I have that in front of
11	me.	
12		Q. Have you read this document before?
13		A. Yes, I have. It has been some time.
14		Q. Can I ask you to turn to page 24?
15		A. Yes.
16		Q. At the top of page 24 does the
17	Board have th	is document?
18		MADAM CHAIR: Yes, we do. Page 24?
19		MR. LINDGREN: Yes, Madam Chair.
20		Q. You will see at the top of the page
21	that these au	thors indicate that:
22		"In their view FEC is currently limited
23		in its utility for three major reasons.
24		First, it is incomplete, it is limited to
25		mature and undisturbed forests primarily

1	40 years of age; FEC has been developed
2	for the northcentral region and
3	northwestern region"
4	Then skipping down a line:
5	"Second, the various FEC schemes
6	currently in existence in Ontario are not
7	integrated with each other"
8	And then in the final sentence:
9	"The FEC system and the FRI system whose
10	spatial scales overlap have themselves
11	not been integrated."
12	Do you agree with those comments?
13	A. I'm sorry, I lost the location on the
14	page where you are.
15	Q. We are on page 24.
16	A. Oh, page 24. I'm sorry, I don't have
17	page 24.
18	Q. Dr. Quinney, I have just read into
19	the record the items that I have highlighted on my
20	page. Can you review them quickly and tell me whether
21	or not you agree with them?
22	A. With reference to the first paragraph
23	that you have highlighted, I agree with those
24	statements.
25	Moving to the

1	Q. I haven't read the second one yet.
2	Everything that I have just read into the record you
3	essentially agree with?
4	A. If you read into the record what is
5	highlighted.
6	Q. I'm not sure how we are going to deal
7	with this.
8	A. Perhaps I will just repeat them.
9	MR. MARTEL: Why don't you do them one at
10	a time.
11	MR. LINDGREN: Okay.
12	Q. My question first was that the FEC is
13	limited because it is incomplete and it is limited to
14	mature and undisturbed forests primarily over 40 years
15	of age, do you agree with that?
16	A. I agree there are limitations.
17	Q. The next question was:
18	"The various FECs schemes that are
19	currently in place are not integrated
20	with each other."
21	Do you agree with that?
22	A. Yes.
23	Q. Finally:
24	"The FEC and FRI systems whose spatial
25	scales overlap have not been integrated

1		as of yet."
2		Do you agree with that?
3		A. Yes.
4		Q. Okay. Then continuing with the last
5	paragraph on	that pagewell, under the heading
6	Recommend Res	earch, we see two major research topics
7	identified.	The first major research need is to make
8	the FEC system	m complete for forested lands.
9		Do you agree with that recommendation?
L 0		A. Yes.
11		Q. The second recommendation is that:
L2		"There is a need to add non-forested
13		lands to the land classification system.
L4		This is important because some wildlife
L5		may require both forested and
L6		non-forested land for survival, growth
L7		and reproduction."
L8		Do you agree with that statement?
L9 ·		A. Madam Chair, I would like to see that
20	type of thing	be done, but to tell you the truth I
21	believe it's	outside of the domain of these hearings.
22		Q. Why is that, Dr. Quinney?
23		A. Well, southern Ontario agricultural
24	lands are not	part of the undertaking.
25		Q. Are there rock barrens, sand dunes,

- agricultural land -- or wetlands and riparian sites 1 within the area of the undertaking? 2 A. Yes, there are. As I mentioned, if 3 4 those areas are subject to timber management activities I would like to see then the FEC system expanded to 5 6 include them. Absolutely. 7 Q. So I guess the point I am trying to establish is this, Dr. Quinney, and it is one that I 8 mentioned at the outset. 9 The FECs offer a good starting point, but 10 there are certain limitations with the FECs and there 11 is certainly room to modify and improve the coverage 12 13 and application? 14 Oh, yes. Α. 15 So when you refer to the use of FECs 16 throughout your witness statement, I take it what you 17 are talking about are FECs that may be modified or improved from time to time? 18 19 What I was referring to, Madam Chair, 20 was that the FEC system provides a feasible and 21 practical way to sustain biodiversity in the area of 22 the undertaking. 23 Okay. Can I ask you to turn to page 24 10 of your witness statement.
- 25 A. Yes.

1	Q. In paragraph 18 you discuss
2	ecosystems of high biodiversity and you seem to equate
3	that with high value. Can we agree that there is also
4	value in maintaining and protecting ecosystems or
5	stands with low diversity?
6	A. With lower diversity, yes.
7	Q. That's because some less diverse
8	ecosystems may, in fact, support rare, threatened or
9	endangered species or they may support species with
.0	specialized habitat requirements?
.1	A. Yes.
.2	Q. So if you convert a species poor
.3	ecosystem into a species rich ecosystem, such as an
.4	early successional stage, you are not necessarily
.5	maintaining biological diversity? You are not doing
.6	anybody a favour by doing that?
.7	A. Mr. Lindgren, your question is not
.8	clear to me because for this reason, that nowhere
.9	have I suggested that a given FEC type, say the white
20	pine dominated FEC type, be converted to anything else
21	What the Coalition is asking for is that
22	we ensure that all of the age classes within a given
23	FEC type remain on the landscape in perpetuity.
24	Q. I wasn't suggesting that the
25	Coalition was advocating conversion, but can we agree

1	that the goal is to maintain biological diversity, not
2	necessarily to maximize the number or abundance of
3	wildlife species on a given parcel of land?
4	A. No. What I'm saying, Mr. Lindgren,
5	is that you can do several things simultaneously. You
6	can maintain biodiversity, at the same time you can
7	produce population levels of selected species
8	population levels desirable by the public.
9	At the same time you can also ensure that
10	rare, threatened and endangered species aren't driven
11	to extinction. You can do all those things
12	simultaneously.
13	Q. I thought we agreed in Panel 4 that
14	if single species management is to be undertaken it is
15	only to be undertaken in a way that does not compromise
16	overall landscape or biodiversity goals?
17	A. No. What I have been saying, Mr.
18	Lindgren, is that well, I just gave you the answer
19	in my previous response. You can maintain biodiversity
20	at the same time as doing these other things.
21	Q. That's not the question, Dr. Quinney.
22	The question is, if you are doing those other things;
23	namely, producing moose or producing some other desired
24	species, you should only do it in a way that's
25	consistent with maintaining overall biological

1 diversity? You're not --2 No, I don't understand that question. 3 Q. Let's boil it down to the essential parts then, Dr. Quinney. You are not advocating that 4 5 all of a particular region be converted to habitat for 6 a particular featured species, correct? 7 Α. Correct. 8 Q. So if you are going to do featured species management it occurs in the context of overall 9 10 biodiversity objectives? 11 A. It occurs in conjunction with 12 biodiversity objectives, yes. 13 Q. So then the proposition that I just put to you should be acceptable to you and that is, if 14 15 you are going to do single species management it can't 16 compromise overall biological diversity goals? Well, I have described what my 17 overall -- a good summary of my overall biodiversity 18 goal was; let's not have any species because of timber 19 management activities be driven to extinction, or in 20 fact below viable levels. 21 Q. Let's move on. Can you turn to page 22 14 of your evidence. At page 14 you discuss the 23 24 Coalition's preferred approach for biodiversity management. You have described it as a hybrid between 25

constraint management and management by objective. 1 Turning first to the objective component, 2 can you please identify how --3 4 MADAM CHAIR: What page are you on, Mr. Lindgren? 5 6 MR. LINDGREN: I'm on page 14. 7 MADAM CHAIR: Thank you. MR. FREIDIN: Where on page 14? 8 MR. LINDGREN: I paraphrased paragraph 24 9 10 which talks about a province-wide constraint and 11 objectives for the purposes of managing for biodiversity. 12 Q. Is that a fair summary of your 13 14 approach, Dr. Quinney? 15 Sorry, could you repeat that for me, 16 please? 17 Q. Throughout paragraph 24 you have 18 discussed a so-called hybrid approach for managing for 19 biodiversity and it includes setting objectives and 20 setting a constraint, correct? 21 Yes. Α. 22 With respect to setting objectives, 23 can you please tell me how concrete or measurable 24 objectives will be set for genetic diversity, species 25 diverse and ecosystem diversity?

1	A. They don't have to be. Following our
2	management approach they don't have to be. They will
3	be safeguarded by ensuring that 10 per cent of the
4	oldest age class in each FEC type is maintained on the
5	landscape in perpetuity.
6	Q. So, in other words, you are not
7	advocating any explicit measures of biodiversity?
8	A. Would you give me an example?
9	Q. You just told me that save and except
10	the 10 per cent constraint you are not setting any
11	particular objectives for any of the elements of
12	biodiversity.
13	I am just saying, if that's the case,
14	then you are not setting any explicit objectives or
15	measures for biodiversity?
16	A. Correct.
17	Q. Can I turn to the constraint element
18	of your approach. If I understand it correctly you are
19	proposing that 10 per cent of each FMU must be retained
20	or maintained in the oldest age class at any given
21	time?
22	A. You have to keep FEC type in mind
23	here and for the FECs types within a given FMU, yes, we
24	are calling for 10 per cent in the oldest age classes.
25	Yes.

1	Q. So going back to your example that
2	you discussed yesterday, if you had a unit with two FEC
3	types, you have to set aside at least two areas
4	amounting to 10 per cent for both of the FEC types?
5	There will a 10 per cent area for FEC
6	type one and a 10 per cent area for FEC type two within
7	the same unit?
8	A. 10 per cent of the land base, yes, in
9	the FMU.
10	Q. Now, a number of parties asked you
11	how the 10 per cent figure was derived and you provided
12	an answer in the interrogatory response to OFIA No. 5.
13	Can I ask you to turn to the
14	interrogatories which is Exhibit 2087 and the response
15	to that interrogatory is found at page 26.
16	A. Mm-hmm.
17	Q. Basically the question asked you how
18	did you come up with 10 per cent, and on page 26 we see
19	a few assumptions; namely, that the FEC will be broken
20	down into a number of categories and there is a further
21	presumption of five stages and an even distribution of
22	age classes.
23	You are assuming 20 per cent of the area
24	in each FEC, then you have taken that 20 per cent and
25	multiplied it by 50 per cent and that gives you 10 per

1	cent.
2	Without getting into the particulars of
3	how you came up with it, can we agree that your 10 per
4	cent figure is simply the result of a mathematical
5	calculation that's described on page 26?
6	A. Well, by definition any percentage
7	derived would be from a mathematical derivation.
8	The most important point to understand is
9	what we are seeking to do here is, No. 1, we are
10	recognizing that rotation ages can be used for
11	different purposes. There can be an ideal rotation age
12	to maximize wood supply, but that rotation age won't
13	necessarily be the best one to maintain biodiversity,
14	the best one to maintain, for example, a proportion in
15	the oldest age classes.
16	So the answer to that interrogatory
17	provides a methodology where we can take into account
18	ecological rotation ages in addition to commercial
19	rotation ages.
20	Q. Well, when I suggested to you that
21	this is purely a mathematical exercise, my point is you
22	haven't done any imperical, on-the-ground scientific
23	research that would allow you to come up with the
24	figure of 10 per cent, correct?

25

A. No, but it's consistent with, as an

1	example, it's completely consistent with Dr. Welsh's
2	paper that I used as a tab in my witness statement.
3	Q. Well, that's an interest point. I
4	reviewed all the literature you filed as part of your
5	witness statement and the exhibits you filed yesterday
6	and nobody provides any support for your 10 per cent
7	figure.
8	Perhaps you can point to me any exhibit
9	that says set aside 10 per cent in the oldest age
10	class?
11	A. You will recall that Dr. Welsh
12	specifically calls for a continual supply of all age
13	classes in the landscape.
14	Q. That's right. But Dr. Welsh does not
15	say it has got to be 10 per cent, does he?
16	A. No, he doesn't.
17	Q. And, in fact, no other paper you
18	filed say it has got to be 10 per cent, correct?
19	A. Yes, that's correct.
20	Q. And in your answer to the OFIA
21	interrogatory you provided no additional literature
22	references that would support your 10 per cent figure?
23	A. That's correct.
24	Q. I think you told me a few moment ago
25	that you and the Coalition have not conducted or

1	commission any studies on the ground within the area of
2	the undertaking that would lead you to the 10 per cent
3	figure; is that correct?
4	A. On-the-ground studies, yes, but the
5	10 per cent was chosen for a very rationale reason.
6	It was chosen to ensure that with
7	variable rotation ages you can maintain a segment of
8	those oldest age classes always in the landscape.
9	That's why.
10	Q. Now, you have indicated that you have
11	not done a study to support the 10 per cent figure.
12	Have you done any studies to determine
13	what the minimum size of the 10 per cent area has to be
14	in order to support viable populations?
15	A. Can you repeat that for me, please?
16	Q. Did you do any studies or conduct any
17	scientific research to determine what the minimum size
18	of the 10 per cent area has to be in order to supply or
19	support viable populations?
20	A. No, I did not nor did the Coalition
21	conduct any primary research, but I'm confident that in
22	providing 10 per cent in the oldest age classes we will
23	maintain biodiversity.
24	Q. Can you tell me if the Coalition

conducted any studies to determine whether the 10 per

25

1	cent should be one big area at any given time or
2	whether it can be an aggregate of lots of small
3	scattered areas within the unit? Did you study that?
4	A. I would say, yes, we certainly
5	considered that, although I'm having some difficulty
6	following you here because it goes back to the
7	conversation I had yesterday with Mr. Martel, for
8	example, concerning parks.
9	If you put a fence around a given chunk
10	of the forest you will not necessarily have a continual
11	supply of the oldest age classes in perpetuity.
12	Q. I fully intend to turn to your parks
13	example, but my question to you had to do with whether
14	or not the Coalition conducted any studies to determine
15	whether or not the 10 per cent should be one big area
16	or an aggregate of lots of little areas?
17	A. I don't understand how it could be
18	one big area.
19	Q. Okay. So when you say that 10 per
20	cent should be set aside at any given time
21	A. Per FEC.
22	Qper FEC that 10 per cent area isn't
23	necessary one big area, it could be an amalgam of that
24	FEC type?
25	A. An aggregation

1	Q. An aggregation.
2	Afrom that specific FEC on the total
3	FMU.
4	Q. But you didn't conduct any studies to
5	determine whether or not that is consistent with or
6	would contribute to the maintenance of biological
7	diversity? You didn't do any scientific research on
8	that, did you?
9	A. Not primary research, but it's
.0	consistent with the scientific literature.
.1	MR. MARTEL: Can I ask a question. Could
. 2	you determine whether it be one large area or would it
.3	be according to the FEC type that's on the particular
. 4	area which could be an aggregate or could be if you
.5	can get a massive area of nothing but jack pine, for
16	example, but primarily it would be based on what's on
.7	the land?
.8	THE WITNESS: Yes, you are quite right,
.9	Mr. Martel.
20	MADAM CHAIR: Dr. Quinney, I think the
21	concern here is that if in fact one FEC type is
22	represented by an area of only two hectares, let's say,
23	that may be highly improbable, I don't know, but let's
24	say that this one FEC type only compromises two per

cent of the FMU in one little spot, are you saying that

25

1	those two hectares would support some populations of
2	species that would entirely rely on that two hectare
3	stand, and then if you further set aside only 10 per
4	cent of it that that would still somehow support
5	biodiversity?
6	THE WITNESS: Just so I am clear with
7	your example. In terms of geographic area that that
8	FEC occupies it is very small?
9	MADAM CHAIR: And it is a single FEC
10	represented area of two hectares.
11	THE WITNESS: And there is going to be -
12	you are asking would
13	MADAM CHAIR: What would be the value of
14	setting aside 10 per cent of such a small area?
15	Maybe there is a value. I am just
16	saying, is there anything worthwhile in setting aside
17	10 per cent of such a small area? What would that
18	accomplish with respect to biodiversity?
19	THE WITNESS: Again, just to be clear.
20	What we have said is that within that very small FEC,
21	10 per cent of the area would be maintained in the
22	oldest age class possible of that FEC. So you would
23	have younger age classes.
24	Would there be biological value in
25	keeping that? Hypothetically I can only answer it

1	hypothetically. Hypothetically yes, but from a
2	practical viewpoint I have trouble visualizing such a
3	concrete example.
4	MADAM CHAIR: I don't know how the
5	landscape is represented by FEC types, if there are
6	many situations where they are interspersed in very
7	small sizes among larger FEC types, I don't know, but
8	presumably that could happen.
9	MR. LINDGREN: Q. Perhaps, Dr. Quinney,
10	I can move on to your comment about parks. You might
11	recall that FFT posed an interrogatory to you on parks
12	This is FFT question No. 10(c) which is found at page
13	of the interrogatory package.
14	A. Which page?
15	Q. Page 5.
16	Q. At the top of page 5
17	A. Can I just find where it is in my
18	witness statement. This was in response to your
19	question 10?
20	Q. Yes.
21	A. Which part of the question, please?
22	Q. The question is question (c) on page
23	5 which asked you:
24	"Would provincial parks or other
25	protected areas in reserve count towards

1	fulfilling the 10 per cent requirement
2	advocated by the Coalition?"
3	And your answer is:
4	"Yes, provided these areas are included
5	as part of the productive land base used
6	to develop wood supply forecasts and
7	are potentially subject to timber
8	management activities."
9	A. Yes.
0	Q. Let me put the question squarely to
1	you, Dr. Quinney. Is the Coalition advocating that
. 2	provincial parks be potentially subject to timber
.3	management activities?
. 4	A. No, they are not.
.5	Q. Then why should they be included as
.6	part of the productive land base used to develop wood
.7	supply forecasts and why let's leave it at that. I
.8	don't understand your answer here.
.9	A. The answer is that it's my
20	understanding that there are at present time certain
21	provincial parks in this province where timber
22	management activities do occur and, therefore, that
23	land base is part of the productive land base in
24	determining wood supply, but the Coalition is not
!5	advocating timber management in all provincial parks.

1 That's nowhere in our terms and conditions. 2 MADAM CHAIR: But are you saying -- the 3 evidence before us is that there is some timber management activity in Algonquin Park and in Lake 4 5 Superior. 6 THE WITNESS: Yes. 7 MADAM CHAIR: Now --8 THE WITNESS: So in a case like that --9 in a case like the Algonquin situation you have given 10 we would consider that could count towards fulfilling 11 the 10 per cent requirement. 12 MADAM CHAIR: But in FMUs adjoining other 13 parks in which there is no timber management activity, can you substitute those park areas for the 10 per cent 14 15 set aside? No? 16 THE WITNESS: No, that's not what we are 17 saying. 18 MADAM CHAIR: So this applies only to Lake Superior and Algonquin Parks? 19 THE WITNESS: Those would be two 20 examples. I guess they are the only two examples I can 21 22 think of. MR. LINDGREN: O. So if I can be clear 23 here, Dr. Quinney, provincial parks, protected areas 24 and reserves would only count towards fulfilling the 10 25

1	per cent if they are subject to timber management
2	activities?
3	A. Correct.
4	Q. But if they are provincial parks or
5	protected areas or reserves they wouldn't be subject to
6	timber management activities, would they?
7	A. Generally speaking not, but, as the
8	Board said, there are parts of Algonquin Park and parts
9	of Lake Superior Park that are subject.
10	Q. Thank you. Can we agree that merely
11	keeping 10 per cent in the oldest age class will not by
12	itself be sufficient to maintain biological diversity?
13	A. Yes, that's correct, but keep in mind
14	there is going to be a continual supply of all the
15	other age classes as well and that will then provide
16	all of the habitats required to maintain viable
17	populations.
18	Q. Well, let's move to habitat. Can we
19	agree that using HSA to generate habitat for moose,
20	deer, marten and pileated woodpecker, that approach by
21	itself will also not be sufficient to maintain
22	biological diversity?
23	A. That's precisely why we have
24	presented a comprehensive biodiversity wildlife
25	management approach through continual supply of FECs,

1	plus management for selected featured species, plus
2	management for rare, threatened and endangered species.
3	Q. Let's talk about those screens
4	because that's my very point, because producing habitat
5	for those featured species will not be enough to assure
6	biological diversity your Coalition has advocated the
7	so-called coarse screen to take care of the big picture
8	biodiversity concern, correct?
9	. I am trying to paraphrase it, but in your
10	evidence you have described a coarse screen to take
11	care of most of the habitat requirements?
12	A. Yes, exactly. Catch the habitat
13	requirements of
14	Q. I take it that you have had an
15	opportunity to review FFT Panel 9 on management for
16	wildlife and biodiversity?
17	A. You asked me to look at pages 33 and
18	there were another page. I looked at page 33, yes.
19	Q. In addition to those two pages, have
20	you ever read it?
21	A. Yes. It has been some time.
22	MADAM CHAIR: What is the exhibit number?
23	MR. LINDGREN: That's Exhibit 1711, Madam
24	Chair.
25	Q. Have you reviewed FFT's terms and

conditions on management for wildlife and biodiversity? 1 A. Yes. 2 Did you attend the hearing when our 3 Panel 9 presented evidence or did you read transcripts 4 from that session? 5 A. I was here for a part of it and I 6 have read those transcripts. 7 O. So --8 MADAM CHAIR: Sorry. Mr. Lindgren, we 9 are on the wrong exhibit number. Did you say 1711? 10 MR. LINDGREN: That's what mine has been 11 12 marked as. It is FFT Panel 9. 13 MADAM CHAIR: All right. 14 MR. LINDGREN: Q. Can I ask you to turn 15 to page 33 of FFT Panel 9, Dr. Quinney? 16 A. Yes. 17 MADAM CHAIR: Could we have Mr. Pascoe 18 see the document that you are using, Mr. Lindgren. 19 MR. LINDGREN: I am on page 33, Madam 20 Chair. 21 MADAM CHAIR: Thank you, Mr. Lindgren. 22 Q. At the bottom of the page, Dr. 23 Quinney, we see a statement of FFTs two-part strategy 24 that was advocated for the management of biodiversity 25 and wildlife. The first is that:

1	"	In the absence of detailed knowledge of
2	m	ost species in Ontario the Ministry
3	w	ill manage all ecosystem elements in
4	p	roportion to their occurrence and
5	S	pacial configuration in the natural
6	1	andscape."
7	C	an you tell me whether or not your
8	so-called coars	e screen proposal is analgous to or
9	similar to FFT	strategy No. 1? Is there any
.0	difference?	
.1	А	. Yes, I believe there is a difference.
.2	Q	. What is the difference?
.3	А	. Perhaps the easiest way to explain
. 4	that is just to	refer you to my witness statement on
.5	page 22 and my	answer to question 40, the second full
.6	paragraph that	begins:
.7	"	The spacial aspect is addressed through
.8	t	wo principal means. First, FECs are
.9	đ	ifferentiated by site, moisture and
20	n	utrient conditions. These are
21	đ	etermined to a large extent by the
22	n	atural physiography of the forest.
23	Т	imber management activities do have a
24	p	otential to modify both site moisture
25	a	nd nutrient conditions to a limited

1	extent. However, in the great majority
2	of cases the spacial distribution of
3	physiographic features is constant. As
4	a result, the range of spacial forest
5	patterns is determined to a considerable
6	extent by the physiography of a forest
7	management unit. Accordingly, forest
8	level biodiversity is relatively constant
9	in terms of the broad patterns within the
10	landscape. Within FEC site types,
11	however, there is potential for
12	significant latitude in the spacial array
13	of age classes. This second aspect of
14	spacial diversity is dealt with through
15	the management procedures discussed in
16	Part 2 of the witness statement."
17	What's of particular note there is the
18	witness statement page 28, answer to question 51(a),
19	fourth paragraph.
20	"Within the broad bounds established by
21	the biodiversity management approach
22	there remains a large number of possible
23	combinations of habitat configurations in
24	terms of patch size and configuration. A
25	consistent, systematic and logical basis

1	to design patches and configurations that
2	will meet wildlife population habitat
3	demands is required. By featuring a
4	select number of species these
5	decision can be focused and tradeoffs
6	among competing wildlife demands for
7	local habitat configuration can be
8	reached in a manageable and practical
9	way."
10	I would also mention, Mr. Lindgren, that
11	this difference then between this aspect of FFT's
12	proposal and our Coalition's proposal is also laid out
13	in my response to your that is the FFT interrogatory
14	No. 19.
15	MADAM CHAIR: Excuse me. What difference
16	was that that you just pointed to, Dr. Quinney?
17	MR. LINDGREN: Well, if I can just
18	interject.
19	Q. I think the difference you indicated
20	was that you have a mid level screen for featured
21	species that would
22	A. It deals, yes. It is my
23	understanding
24	Q. That wasn't my question. I am not
25	dealing with the mid level. I am talk about the coarse

1	screen so-called at the top.
2	Now, I have read your witness statement,
3	I have read your response to page 51 or question 51
4	and if I understand it you are saying that what the
5	Coalition wants is to maintain a forest landscape
6	comparable to historical patterns.
7	"It is reasonable to expect that this
8	landscape will be adequate from a habitat
9	perspective to maintain viable
10	populations of most forest wildlife
11	species."
12	That's your coarse screen, correct?
13	A. Yes.
14	Q. Okay. Without getting into the 10
15	per cent constraint, without getting into featured
16	species, is there any substantial difference between
17	what you have advocated as a coarse screen and FFT
18	strategy one which says basically supply all ecosystems
19	element that occur now in the natural landscape?
20	What's the different between your
21	proposal and our proposal?
22	A. Yes. FFT is saying manage all
23	ecosystem elements in proportion to their occurrence.
24	I don't believe that we significantly
25	differ there. I have just described, for example, that

1	physiographic features are going to largely delineate,
2	for example, where you find FEC types, but what I was
3	trying point out was FFT is also saying:
4	"Manage all ecosystems elements
5	in proportion to their occurrence and
6	spacial configuration in the natural
7	landscape."
8	What I've tried to point out is that we
9	specifically deal with the question of habitat patch
10	sizes and shapes within FECs, and I don't believe that
11	the FFT approach has addressed that question.
12	MR. MARTEL: Can you explain the
13	difference to me, then? I mean, I am having difficult
14	with both these
15	THE WITNESS: Example. Suppose there is
16	going to be cutting in a given FEC type. The size of
17	the cuts, the shape of the cuts are almost infinite.
18	So how do you decide upon the size and
19	the shape of the cuts, and what we are saying is that
20	in the case of the boreal forest use moose habitat
21	and the production of moose habitat and the
22	production of pine marten habitat to provide a basis
23	for making those decisions that have to be made.
24	MR. MARTEL: And you are saying Forests
25	for Tomorrow doesn't do that?

1	THE WITNESS: To the best of my
2	knowledge, Forests for Tomorrow in their terms and
3	conditions don't address the question of habitat patch
4	sizes and shapes within forest ecosystem types.
5	MR. LINDGREN: Q. Not to argue the
6	point, Dr. Quinney, but I believe if you look at the
7	terms and conditions there are specific prescriptions
8	for patch size and layout and so forth, but let's leave
9	that for final argument.
.0	I will return to the question of featured
11	species in a moment, Dr. Quinney. Can I ask you to
.2	return to page 33 of the FFT witness statement.
13	Strategy 2 says:
4	"In the context of landscape management
15	certain species for which more detailed
16	information can be collected will be
L7	monitored more intensively. Some species
18	may be managed on a sound scientific
L9	basis so as to increase their abundance
20	to meet the needs of society. However,
21	that will be done in a manner which will
22	not general jeopardize the health of
23	other species."
24	Are you in general agreement with that
25	strategy?

1	A. Yes.
2	Q. And is that roughly analogous to your
3	fine filter that you have described for local species
4	specific management?
5	A. Yes.
6	Q. Thank you. Can I turn to the
7	question of featured species. You have identified four
8	species that you want the MNR to feature provincially.
9	By featuring these species I take it that
.0	you mean that the Ministry must manage for those
.1	species and not just merely monitor them?
.2	A. Correct.
.3	Q. In other words, the Ministry must
. 4	provide the particular habitat required for your
.5	featured species throughout the area of the
.6	undertaking?
.7	A. Yes. Must provide the habitat, yes.
.8	Q. I think you have said in your witness
.9	statement that over time the number of featured species
20	may in fact increase?
21	A. Conceivably.
22	Q. So if we add further featured species
23	we have to start providing habitat for them, too,
24	right?
25	A. You would have to manage for them

1	also, yes, if	there were additional featured species
2	eventually inc	luded.
3		Q. If that's the case, Dr. Quinney, it
4	appears to me	that you are moving away from landscape
5	management and	back into species specific management
6	and that's why	we posed the interrogatory No. 19 to
7	clarify how th	e proposals regarding featured species
8	fit in with yo	ur proposals regarding management for
9	biodiversity.	
. 0		Madam Chair, that's found on page 9 of
.1	the interrogat	ory package.
.2		You have given us a lengthy response and,
.3	quite frankly,	I have reviewed it and I still don't
. 4	understand it.	
.5		Can I refer you to page 11 which deals
.6	with featured	species in the middle of the page. At
17	page 11, parag	raph No. 3, you say that:
18		"There is an objective to provide or
.9		ensure adequate habitat for certain
20		species with high recreational, economic
21		or other importance; namely, provincially
22		featured and local significant species."
23		Skipping a paragraph:
24		"These species will also be used to
25		assist in specifying the spatial and

1	temporal habitat requirements of many
2	wildlife species in the area of the
3	undertaking; that is, they will be used
4	to assist forest managers in deciding on
5	the spacial and temporal configuration of
6	forest stands in an FMU."
7	A. Yes, that's the patch size and shape.
8	Q. That sounds to me like species by
9	species management, not landscape management. I
10	thought landscape manager was going to determine
11	configuration.
12	So, again, I want a precise answer from
13	you. How does featured species fit into overall
14	landscape management?
15	A. That's thoroughly described in both
16	the witness statement and the interrogatory I have
17	provided to FFT.
18	Q. Well, with respect, Dr. Quinney, it
19	appears that you want your cake and you want to eat it
20	too, if that's makes any sense. On the one hand you
21	are talking about managing the landscape to ensure
22	perpetual supply of all representative and functioning
23	ecosystems, right?
24	A. Yes.
25	Q. But, at the same time, you are saying

1	you want to provide habitat for moose, marten,
2	woodpecker and deer?
3	A. Yes, they are consistent and
4	complimentary, yes.
5	Q. Well, I am going to put you to your
6	choice here, to your election, Dr. Quinney. What is
7	the Coalition really asking for?
8	Do you want landscape management or do
9	you want species by species management as reflected in
10	your featured species proposal?
11	A. My answer, Mr. Lindgren, is it's
12	described clearly in our terms and conditions. It is
13	described clearly in my witness statement and it has
14	been clearly described in interrogatory responses
15	including responses to FFT.
16	Q. So you have got nothing further to
17	add by way of explanation?
18	A. I spent an entire day yesterday
19	explaining a comprehensive wildlife/timber integration
20	management proposal.
21	Q. Have you filed the analysis that led
22	you to select those four featured species?
23	Has that document been filed, Mr.
24	O'Leary?
25	MR. O'LEARY: It hasn't been filed vet.

1	no.
2	MR. LINDGREN: When were you intending to
3	file it?
4	MR. O'LEARY: I want to make sure that
5	I have got the final draft. There were a couple of
6	typos in the copy I had and I just haven't had a chance
7	to look at it. I just looked at it this morning. As
8	soon as I am satisfied that this is in shape I will
9	file it.
L 0	MR. LINDGREN: Like Mr. Freidin, Madam
11	Chair, we have a profound interest in the analysis that
L2	led to the selection of those species. I would
13	certainly like to reserve the opportunity to pose
L4	further questions on that document once it becomes
L5	available.
L6	MR. O'LEARY: It is available. I think
L7	Mr. Freidin has a copy.
18	MR. FREIDIN: Well, it came early this
19	morning. There is no way that I could deal with that
20	document.
21	I would like to tell you right now, Madam
22	Chair, that I have a few, very broad general questions
23	to ask about it, but I am going to be asking for
24	leave to grant leave today that at some future time
25	perhaps when Mr. Quinney is on Panel No. 9 or, if

25

necessary, some other time that the witness be made 1 available to answer questions on that analysis. 2 MADAM CHAIR: Is this your last area of 3 cross-examination, Mr. Lindgren? 4 MR. LINDGREN: Next to last. I think 5 what Mr. Freidin is a reasonable approach. I would 6 like the opportunity to pose questions on the document 7 which I don't have. 8 9 MADAM CHAIR: Go ahead, Mr. Lindgren. 10 The Board will be inclined to give counsel the 11 opportunity to cross-examine Dr. Quinney on this 12 document. 13 MR. FREIDIN: Thank you. 14 MR. LINDGREN: Thank you. 15 Now, I take it that one of the 16 reasons you are proposing those four species be 17 featured is that by featuring those species you are 18 going to provide habitat for a lot of other species? 19 That was partially one of our 20 reasons, yes, and it will assist in providing habitat 21 for other species. 22 For example, in the case of pine marten 23 in the boreal forest, with pine marten requiring older 24 age classes and larger patch sizes, that will be 25 providing habitat for other species as well, yes.

1	Q. You are aware that when Dr. Euler was
2	talking about featuring moose he was quite specific to
3	say that moose was not selected because it had spin-off
4	ecological benefits for other species. It was selected
5	because it was an animal with high socio-economic
6	value. Do you recall that testimony?
7	A. I would like to see the reference.
8	MADAM CHAIR: I don't know if you are
9	characterizing Dr. Euler's evidence exactly, Mr.
10	Lindgren
.1	Certainly the value of moose as a species
12	with social and economic value is well understood. I
L3	believe there were also aspects of moose habitat.
L 4	MR. LINDGREN: Unfortunately, I didn't
L 5	get the transcript, but I believe he said that at the
L6	time it was selected it was not selected because they
L7	thought it was going to provide habitat for other
L8	species, but I will to have to check the transcript on
L9	that.
20	MR. FREIDIN: That's my recollection as
21	well, Madam Chair.
22	MR. LINDGREN: Q. In any event, Dr.
23	Quinney, what imperical studies has the Coalition
24	conducted or commissioned to determine what the
25	spin-off ecological benefits for other species will be

1	if you feature the four you want?
2	A. I don't believe that that type of
3	research is necessary. That information is already
4	available.
5	Q. Have you conducted
6	A. There has been a heck of a lot of
7	work done by MNR biologists in other jurisdictions.
8	Q. I guess the short answer to my
9	question is the Coalition has not conducted any studies
10	to determine that issue?
11	A. Sorry, to
12	Q. Determine the issue of whether or not
13	there are, in fact, spin-off ecological benefits for
14	other species if you feature the ones you have
15	identified?
16	A. Well, sure we have because in making
17	the selection we closely studied, for example, the
18	literature, MNR programs, et cetera, et cetera.
19	Q. Did you go out and conduct any
20	scientific testing of the hypothesis that featuring
21	pileated woodpecker is going to provide adequate
22	habitat for other species? Did you test that
23	hypothesis in the field?
24	A. I did not, no.
25	Q. Did the Coalition retain anybody to

1 look at that question in the field? 2 No, but my point is I don't believe 3 that that's necessary. Those answers are already 4 existing in the literature. 5 Q. Did the Coalition conduct any studies 6 to determine whether the cumulative effects on forest 7 structure will be if you feature those four species? 8 A. Again, the answers already exist for 9 those questions in the literature. 10 O. Did the Coalition conduct no 11 independent research on that issue? 12 No. Q. Can I ask you to return to Exhibit 13 2089 which is the McClaren paper and Euler paper. I 14 have a final series of questions for you on this 15 16 document. MADAM CHAIR: Are your questions going to 17 be very long, Mr. Lindgren? 18 We would take our break now unless you 19 are going to be just few minutes in which case we would 20 finish your cross-examination. 21 MR. LINDGREN: I think I can finish in a 22 few questions, Madam Chair. 23 MADAM CHAIR: All right. 24 MR. LINDGREN: Q. At page 4 of this 25

document, Dr. Quinney, the authors identify four 1 fundamental problems associated with featured species, 2 the featured species approach, and you went through 3 4 these yesterday. 5 I think you indicated that in your view those are problems associated with the MNR's version of 6 featured species, but not your version of featured 7 species? 8 9 A. Correct. Q. Can you explain to me how simply 10 11 adding two more featured species is going to overcome the problem of, say, the problem identified in No. 3 12 13 that there are groups of species whose habitat requirements are so poorly known that there is no way 14 15 to assess whether or not the guidelines provide adequate habitat? 16 17 How does adding marten or woodpecker 18 overcome that problem? 19 A. You are misunderstanding our approach 20 here, Mr. Lindgren. 21 Our management approach includes, as I 22 described at length yesterday and is described in my witness statement and elsewhere, a multi-faceted 23 24 approach to wildlife and biodiversity management in the 25 area of the undertaking.

1	What I tried to stress with the Board, I
2	used at the end of the day the pail analogy, the water
3	pail analogy that each of those elements in our
4	management scheme, the supplying of FEC types, the
5	featured species, the other significant species
6	management for rare, threatened and endangered go hand
7	and hand and that's what I have been describing.
8	Q. That's not the question, Dr. Quinney.
9	The question is simply this, simply adding two more
10	featured species by itself
11	A. But that's not what we are
12	advocating. MNR
13	Q. I am entitled to pose the question in
14	any way, shape or form that I like and the question is
15	this, Dr. Quinney. Simply adding two more species by
16	itself is not enough to address the fundamental
17	concerns set out on page 4.
18	MR. O'LEARY: Madam Chair, with respect,
19	he has answered that question now several times.
20	MR. LINDGREN: I haven't heard a single
21	answer to that question yet.
22	MR. O'LEARY: He has responded to the
23	question by indicating it is inappropriate. It is not
24	a proper characterization of the Coalition's evidence.
25	MADAM CHAIR: Mr. Lindgren is entitled.

- Mr. O'Leary, to pose the question the way he wants.
- 2 Dr. Quinney is entilted, as he has been all along, to
- answer the question and then qualify his answer.
- I understand Mr. Lindgren's question is,
- if your approached involved only adding two species to
- 6 the feature species approach would it address the
- 7 problems identified in page 4 of Exhibit 2089?
- 8 THE WITNESS: If we were to add two
- 9 additional species--
- MADAM CHAIR: And do nothing else.
- 11 THE WITNESS: --to the MNR current
- featured management approach, no, that wouldn't be
- 13 adequate.
- MR. LINDGREN: Thank you.
- Q. Very quickly, Dr. Quinney, I take it
- you have had an opportunity to review this document in
- 17 its entirety?
- 18 A. Yes.
- Q. On page 6 of the document we see a
- 20 list of six items that should be undertaken if we are
- 21 serious about planning for the maintenance of
- 22 biodiversity.
- Do you see that on page 6, a list of six
- tasks that we have to undertake? There is a list of
- 25 six items.

1	A. Yes, I see a list of six items.
2	Q. Are you in general agreement with the
3	tasks that are identified there?
4	A. Yes.
5	Q. Okay, thank you. Now, I take it,
6	turning to the next page, Table 1, I take it you have
7	had an opportunity to review that table?
8	A. Yes.
9	Q. Very briefly, we see in the left-hand
10	column a description of what we would like to have in
11	terms of managing wildlife habitat, the middle column
12	shows where we are now and the third column contains a
13	set of recommendations in terms of moving towards
14	managing wildlife habitat.
15	MR. O'LEARY: Sorry, which column are you
16	referring to?
17	MR. O'LEARY: The far right-hand column.
18	MR. O'LEARY: Moving to the ideal world?
19	MR. LINDGREN: That's correct.
20	Q. Now, you have reviewed the table, are
21	you in any serious disagreement with the items set out
22	in this table?
23	A. I would have to go through them one
24	by one.
25	Q. You have said that you have read it.

Do you any objections to what's set out there or do you 1 2 recall? A. You would have to -- I can't recall, 3 4 Mr. Lindgren. You would have to be more specific. Q. Is there anything in this table that 5 you disagree with having read it? 6 7 A. Madam Chair, I would have to take the time to go through it line by line to answer that 8 question. 9 10 MR. LINDGREN: Madam Chair, perhaps I 11 would ask him for an undertaking to do that very thing. Is there anything in Table 1 that you have serious 12 13 disagreement with. MR. O'LEARY: We would be happy to answer 14 15 that by way of undertaking if that helps expedite 16 matters today. 17 Q. Dr. Quinney, my final question stems 18 from page 9. At the bottom of page 9, the last 19 paragraph, we see a statement to the effect that it has 20 been advocated that Ontario adopt a policy of planning 21 for wildlife values in forest management through 22 traditional habitat supply modelling; i.e., using a 23 various small number of perameters to establish habitat

Skipping a line:

quality for a few species.

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1	"For example, the pileated woodpecker, a
2	species requiring large snags for nesting
3	has been suggested as an appropriate
4	species for HSM because theoretically
5	providing habitat for it will also ensure
6	that large snags are available for other
7	species that require them. This may be
8	true, but there are other simpler ways
9	to ensure large snags are available. In
0	terms of testing population predictions
1	arising from such models neither
2	relatively uncommon species such as
3	the pileated woodpecker nor harvested
4	species such as moose are appropriate."
.5	Do you agree with those comments?
6	A. No, I do not. I disagree with them
.7	for several reasons, Madam Chair. Let me begin at the
.8	beginning of that paragraph. We are at the final
.9	paragraph in page 9. It says:
20	"It has been advocated that Ontario adopt
1	a policy of planning for wildlife values
2	in forest management through traditional
13	habitat supply modelling."
4	I don't know who the authors are
25	referring to. They are certainly not referring to

1	either me or the NOTO/OFAH coalition. So I would like
2	to know who is advocating that.
3	As you know, Madam Chair, the Coalition
4	is calling for a comprehensive approach to wildlife
5	biodiversity integration with timber management
6	planning.
7	There is also an example given.
8	"For example, the pileated woodpecker,
9	a species requiring large snags for
LO	nesting has been suggested as an
11	appropriate HSM because theoretically
12	providing habitat for it will ensure that
L3	large snags are available for other
L 4	species that require them. This may be
1.5	true, but there are other simpler ways to
16	ensure that large snags are available."
L7	Well, I don't know who has suggested that
L8	the pileated woodpecker be chosen to be featured simply
L9	to provide large snags. I would like to know who
20	suggested that because, again, certainly it hasn't been
21	our Coalition. So I am disagreeing.
22	Finally the last statement states:
23	"In terms of testing population
24	predictions arising from such models
25	- neither relatively uncommon species such

1	as pileated woodpecker"
2	That sentence doesn't make sense to me.
3	I mean, the pileated woodpecker in the Great Lakes/St.
4	Lawrence Forest, which is where the Coalition is asking
5	that it be featured, is very common. It is widespread
6	in the Great Lakes/St. Lawrence Forest.
7	The statement goes on to say:
8	"In terms of testing population
9	predictions nor harvested species such as
10	moose are appropriate."
11	I disagree with that. Part of the reason
12	I disagree with reference to testing population
13	predictions is a tremendous amount of information is
14	available on moose, it continues to be collected, et
15	cetera, et cetera. So I disagree with that.
16	Q. My final question arises out of the
17	following page. At the top of page 10 we see the
18	statement that:
19	"In the context of managing forests for
20	conservation of ecosystems and
21	biodiversity relying entirely on HSM for
22	a small number of species to make
23	management decision that will influence
24	the whole forest ecosystem is
25	inadequate."

1	Do you agree with that assessment?
2	A. I agree with that statement and I
3	would like to add that neither I nor the Coalition I
4	don't think have made any such suggestion.
5	MR. LINDGREN: Thank you, Dr. Quinney.
6	Thank you, Madam Chair, those are my
7	questions for this witness subject to
8	MADAM CHAIR: Thanks, Mr. Lindgren. You
9	have got two outstanding issues with respect to this
10	evidence?
11	MR. LINDGREN: That's right. The
12	undertaking that was just given and this other
13	mysterious document that I don't have yet.
14	MADAM CHAIR: All right. I don't know
15	whether we will decide today or not about whether Dr.
16	Quinney will come back next week to be cross-examined
17	on this document or whether we will wait until Panel 9
18	I suggest that you and Freidin speak to Mr. O'Leary and
19	present the Board with an agreed upon schedule for
20	that.
21	MR. FREIDIN: Do we have two weeks set
22	aside for Panel 9?
23	MADAM CHAIR: For what, Mr. Freidin?
24	MR. FREIDIN: It looks like we have two
25	wooks for Panol 9

1	MADAM CHAIR: For what reason?
2	MR. FREIDIN: For Panel 9.
3	MADAM CHAIR: No, we haven't done the
4	scoping of Panel 9 yet.So I don't know how long the
5	MR. MARTEL: There are two weeks at the
6	end.
7	MADAM CHAIR: Yes, there are two weeks at
8	the end. I don't know if that's scheduled all for
9	Panel 9.
10	MR. FREIDIN: There is nothing scheduled
11	for maybe one week. So we have the extra week if Panel
L2	9 doesn't go. If we have the extra time, we suggest
13	that we deal with this whole issue in Panel 9.
L4	MADAM CHAIR: Yes. You go sort it out
L5	and come back with an answer for the Board.
16	MR. FREIDIN: Can we proceed on the
L7	assumption that the extra week is available if
L8	MADAM CHAIR: The Board will not sit for
L9	an extra week to hear you and Mr. Lindgren
20	cross-examine Dr. Quinney on this document.
21	Whether some time can be set side in that
22	week to do so we would listen to that, sure, but it
23	won't take a week. We will be back in 20 minutes.
24	Recess at 10:40 a.m.
25	On resuming at 11:00 a.m.

1	MR. O'LEARY: Madam Chair, Mr. Lindgren
2	and Mr. Freidin and I did speak about the evaluation
3	document that will be filed shortly in which both of
4	those gentlemen would like to question Dr. Quinney.
5	We felt the most appropriate time would
6	be to deal with it in Panel 9 either at the beginning
7	or at the end and we are all in agreement with that and
8	subject to your views that's when we would like to
9	proceed with that matter.
10	MADAM CHAIR: That's fine with the Board
11	and hopefully you can agree to keep to a tight schedule
12	on that cross-examination.
13	CROSS-EXAMINATION BY MR. FREIDIN:
14	Q. Dr. Quinney, I understand that one of
15	the sort of purposes behind your 10 per cent rule,
16	approach to biodiversity, is to maintain minimum
17	proportions in current ecological categories?
18	A. Yes.
19	Q. And by current ecological categories,
20	I take it that that means the ecological categories
21	which appear now in the FECs?
22	A. Subject to refinement of FECs. As
23	with any system improvements are made on an ongoing
24	basis.
25	Q. But suggest to let's assume they

1 are no improvements, you want to start now. I take you 2 want to start now by maintaining minimum proportions in 3 the FECs as they are in fact described now in the 4 various classification guides? 5 Yes, using the best information 6 available. Yes. 7 Q. You have talked about maintaining 8 FECs and you talk a lot in your evidence about what 9 kind of tree species and vertical structure and that sort of thing. I took it from your evidence that when 10 11 you are talking about FECs you are talking about the 12 vegetation types which are described in the various FEC documents, is that correct? 13 14 Α. Yes. 15 Now, would you agree that the forest that we have out there now in terms of its age-class 16 17 distribution is somewhat different than what it would have been in a natural situation? 18 19 You mean... No man disturbance. No fire 20 protection, let's start with that one. 21 If there were no fire prevention 22 scenario of no fire prevention versus, for example, 23 timber management activities would the forest structure 24

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would be different?

1	Q. Yes.
2	A. It could be.
3	Q. Well, there has been considerable
4	evidence that as a result of fire prevention we have a
5	boreal forest which is skewed to the mature and
6	overmature. Are you familiar with that evidence?
7	A. Not off the top of my head.
8	Q. Are you able based on your expertise
9	to agree or disagree with that evidence?
10	A. At this time I couldn't agree or
11	disagree.
12	Q. Thank you. And I understand that
13	FECs, the way they are designed at the present time, is
14	that they only identify mature stands? They categorize
15	or classify mature stands?
16	A. Yes.
17	Q. Would you agree, therefore, that if
18	you went out and you started today and you wanted to
19	determine how much of any particular FEC you had that
20	the proportion or the amount in any one FEC might very
21	well be unnatural if, in fact, my assumption is correct
22	that we have mature and overmature forests due to fire
23	prevention?
24	A. You're referring to the age classes
25	within a FEC unmanaged as a result, for example, of

1	fire disturbance versus a managed scenario?
2	Q. Yes.
3	A. Now, having said that could you pose
4	the question to me, please.
5	Q. All right. You are talking about
6	starting now. You say, let's start doing something now
7	with biodiversity and you propose a 10 per cent rule,
8	that's right?
9	A. 10 per cent, yes.
10	Q. You acknowledge that FEC only
11	identifies mature stands; is that correct?
12	A. Yes.
13	Q. And let's assume that the amount of
14	mature stands that we have got has been greatly
15	affected by fire prevention such that you have got a
16	lot more of those mature stands than you would have had
17	in a completely natural setting?
18	A. Than 10 per cent? More than 10 per
19	cent?
20	Q. I am just talking about in the mature
21	stands that would in fact fall within the FECs as they
22	are presently developed.
23	A. I'm sorry, I'm having difficulty
24	following your question, Mr. Freidin.
25	Q. Do you agree, sir, that FECs deals

with age classes -- does it describe age classes other 1 than just the oldest age class? 2 A. No, it doesn't. It's based on the 3 oldest or mature stage. 4 O. How is that defined in the FECs, that 5 6 mature stage? What are some of the characteristics? 7 Α. Well, you gave some evidence earlier 8 9 on about FECs deal with stands over approximately 40 10 years of age? 11 A. How the classification system was 12 determined? 13 Q. How old does a stand have to be 14 generally to be included in a FEC? 15 A. It has been to be in a mature stage, 16 was how the classification was based. That's my information. 17 Q. For instance, black spruce, how long 18 19 will a black spruce live in a lowland black spruce bog, 20 Dr. Quinney? 21 A. Are you referring me to a particular 22 FEC? 23 Q. Well, no, I'm just asking it as a 24 general proposition. Do you know how long a black 25 spruce generally will live in a lowland situation?

1	A. No, I don't.
2	Q. Do you know what age well, can you
3	turn to the northwest FEC which has been marked as
4	Exhibit 1531, please.
5	A. 1532?
6	Q. Yes, that's what I have got it marked
7	as. 1531, I'm sorry.
8	MADAM CHAIR: We have ours marked as
9	1532. Is this for northwestern Ontario, Mr. Freidin?
10	MR. FREIDIN: Yes, but one is an
11	interpretation guide. I remember I mixed up the
12	MADAM CHAIR: We have got the field guide
13	and our interpretation guide is also marked Exhibit
14	1532B.
15	MR. FREIDIN: That's what happened.
16	1532A then I guess.
17	THE WITNESS: What page would you like me
18	to refer to?
19	MR. FREIDIN: Page 1.
20	MADAM CHAIR: Page 1 under Orientation,
21	Mr. Freidin?
22	MR. FREIDIN: Yes.
23	Q. If you look at the third paragraph, it
24	says:
25	"The classification system presented in

1	this guide was developed using data
2	collected from many relatively mature
3	forests situated on a range of land forms
4	and soils throughout northwestern
5	Ontario. The northwestern Ontario FEC
6	data base is primarily based on mature
7	natural forest over 50 years, although
8	some younger and second growth forests
9	are also represented."
10	Now, it is my understanding that you look
11	at, say, a black spruce stand which has been assigned a
12	FEC number, you would be looking at a description of a
13	black spruce stand which could be 50 years or 60 years
14	old?
15	A. Mm-hmm.
16	Q. Now, when you give the age classes
17	we know, by the way, that black spruce will live a lot
18	longer than 50 years, it could live up to 120 years,
19	140 years depending on where you find it.
20	For the purposes of your 10 per cent rule
21	where you are talking about maintaining a certain
22	amount in the oldest seral age or the oldest age class,
23	are you using age class in this context 50 years up to
24	the time it dies?
25	A. I'm using in the sense of, yes, the

- 1 natural longevity.
- Q. All right. This is where my
- 3 confusion comes. We have heard a lot of evidence and
- 4 we seen a lot of histograms about age classes and
- 5 usually they go 0-20, 20-40, 40-60, 60-80, all the way
- 6 up.
- 7 When I read your evidence and you talked
- 8 about preserving something in the oldest seral stage,
- 9 which you said in an interrogatory was the oldest age
- 10 class, I said into myself: All right, if you are
- 11 talking about black spruce you must be talking about
- 12 that category at 120-140.
- 13 That's what I thought you were talking
- about and I'm trying to clarify in my mind when you are
- 15 talking about the oldest age class for the purpose of
- 16 your biodiversity approach, are you talking about age
- 17 classes in that context or are you talking about the
- 18 oldest -- the mature stage that are set out in the FECs
- here which is basically 50 and beyond until it changes,
- 20 until it dies?
- 21 A. Well, the FEC classification system
- 22 as stated was based primarily on mature natural forest
- over 50 years of age.
- Q. Well, that's what the FEC has done,
- but what does your age class rule in term and condition

- 1 161 apply to? Which kind of age class are you talking
 2 about?
- A. The mature. We want to maintain 10 per cent, okay, in the oldest -- in the mature phase.
- Q. Okay. So if you have a particular

 FEC type that you find out there on the landscape at

 age 50 and that --
- 8 A. Is the mature --
- 9 Q. It is mature--
- 10 A. That's the mature.
- 11 Q. --based on the FEC?
- 12 A. Yes.

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- 13 And let's say that particular 0. 14 structure, that particular stand basically stays the 15 same, it may grow and get older, but it stays the same 16 for 60 years, okay, are you saying that the way your 17 rule works is that as long as 10 per cent, as long as 18 10 per cent of the total area in that FEC - and you go 19 right back to day one and now say it is up to 120 - as long as 10 per cent is in the 50-120 age class that you 20 21 are okay? Is that how you work your 10 per cent rule?
 - A. Well, in terms -- as I stated in my evidence, in terms of the determination of the age classes themselves for each FEC that would be done at the local level based on, for example, ecological

1 considerations as well as fiber production considerations, but if we had a hypothetical --2 3 Use my hypothetical if you can. 4 Α. Yes, I was just going to. If we had 5 a hypothetical FEC where the oldest age class was 50-70 6 years, then what we are asking for is that 10 per cent 7 of the land base in that FMU -- 10 per cent of the land base in that FEC be kept. 8 9 Q. I understand that and you happen to 10 just say if it was 50 and it died at 70. You just 11 happened to pick the 20 years. 12 I am talking about a situation where you 13 have got a FEC which appears on the landscape and it stays in the same FEC and it stays like that from age 14 50 to age 120, 70 years. 15 Now, maybe you haven't thought this 16 through enough and that's why you can't answer the 17 guestion, but --18 19 Α. I disagree. All right. In that, in fact, is the 20 mature stage of that FEC, it's same -- it's the last 21 phase -- pardon me, the FEC is identified and it sits 22 on the landscape for 70 years before it dies, when your 23 10 per cent rule comes in are you saying that as long

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as -- when you say I maintain 10 per cent, is it 10 per

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cent of the area, the total area now in that FEC that 1 you find out there which is 50 years old all way up to 2 120 years old? 3 A. If that was the oldest age class 4 determination, yes. 5 Q. Now, if that's the oldest age class 6 7 determination there is no other age class determination in the FEC, is there? 8 9 Α. No. 10 Q. So then is the answer then it will be 11 based on the total area which is in that FEC type -the oldest seral stage then would be the total area 12 13 which is in that oldest FEC type regardless of its 14 chronological age? 15 Regardless of its... A. 16 Q. Regardless of its chronological age. 17 I'm sorry, I don't understand. Α. 18 Dr. Quinney, what I have just drawn 19 is a histogram and I just tried to indicate by the 20 vertical lines various ages classes. So the trees over here will be 20, 40, 60 -- you know, 60-80, 80-100, 21 22 100-120 years of age, okay? 23 Mm-hmm. Α. 24 Now, you have a 10 per cent rule.

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have agreed that the FEC might very well describe a

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- particular vegetative structure on the land base and it
 will be assigned a V type, all right.
- Let's say that that V type appears on the
 landscape, this mature stand for the purposes of FEC
 categorization occurs at age 60. Let's say it's black
 spruce and let's say that biologically what happens out
 there in the real world is that black spruce stand
 doesn't change a heck of a lot--
 - A. Ecologically.

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Q. --ecologically in terms of the FEC

11 classification from age 60, let's say, to age 120. You

12 have now got a 60-year period in which that particular

13 FEC class is in the mature stage.

My question was, when you apply your 10

per cent rule and you say you must always ensure that

at least 10 per cent of your black spruce FEC in this

example is in the oldest seral stage, are you saying 10

per cent must be in -- I take it must be in this 60-120

year time frame?

- A. I'm saying --
- Q. Are you saying that, yes or no?
 - A. No, I'm saying 10 per cent in the oldest age class and you have given, for example, in this example 100-120. So what we would be asking for is 10 per cent in this age class.

1	Q. 10 per cent in the oldest the last
2	20 years of that particular FECs existence?
3	A. Yes.
4	Q. All right. Now, I take it from your
5	evidence about this term and condition 161 and the 10
6	per cent rule that your proposal is based on the
7	assumption that each FEC type is composed of a number
8	of age classes?
9	A. Yes.
L 0	Q. In this case that we have just
11	discussed this particular FEC would have age classes of
L2	60-80, 80-100 and 100-120?
13	A. Yes.
L4	Q. I think I understood your earlier
L5	evidence that some FECs types will cease to exist at
16	some point in time; they will die or they will change?
17	A. Well, yes, you have indicated
18	basically a longevity of up to 120 years here. There
19	may be other species where the ecological age would be
20	younger.
21	Q. That's why you had a FEC 1 and FEC 2
22	in your examples?
23	A. Yes.
24	Q. Okay. So looking at northwestern
25	Ontario, if we use the forest ecosystem classification

1 document, Exhibit 1532A, we have approximately I think 2 38 V types? 3 Α. Yes. 4 So you have 38 FECs? 0. 5 A. Throughout northwestern Ontario, yes. 6 Q. All right. To date, is there any 7 assignment of a V type description given to early 8 successional stands? 9 A. No, there's not and we are supporting 10 work be done in that regard. 11 If there is no V type or FEC type 12 assigned to the earlier successional stages yet, how do you go about in your proposal, which you say should be 13 14 implemented now where you have got one of these FECs, how do you go about figuring out the 10 per cent 15 16 amount? 17 I mean, is 10 per cent -- how do you do that because part of the land base --18 Well, you have provided an example, 19 Mr. Freidin, here where you have the mature situation 20 and age classes are already assigned. 21 O. No, I have got only age classes 22 assigned from 60-120 because the FEC only tells me or 23 describes FEC for mature stands only. 24

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How do you know how much of the area in

stands 60 years and younger out there on the landscape 1 are, in fact, earlier successional stages of the mature 2 FEC, of this mature FEC or that mature FEC, in in fact 3 it hasn't been classified yet? A. You have to make certain assumptions, 5 6 but it is my understanding that that can be done. Have you worked firsthand with FEC 7 Q. 8 documents? 9 Α. No, I don't have personal training in --10 11 In fact, I think you were asked in an 0. 12 interrogatory by Forests for Tomorrow. 13 Α. Yes. I think it was 13. 14 0. 15 Α. Yes. 16 0. I think it was one of the 17 supplementary ones. Unfortunately, Madam Chair, I don't how 18 19 that document got marked or paginated because I am 20 working off my old ones which are all marked up, but it 21 is FFT interrogatory No. 13. 22 MADAM CHAIR: That would be page 6 of 23 Exhibit 2087. 24 MR. FREIDIN: Q. You were asked to 25 describe your personal knowledge, training and

1 experience regarding integration of FRI and FEC 2 information. The question was in relation to the 3 integration of the two. You said: 4 "I do not personally have training 5 regarding the integration of FRI and FEC 6 information, but I know that it is being 7 done in Ontario." 8 We will get to that later. 9 So you have no personal -- personally you 10 have no training regarding the integration of FRI and FEC. Do you have any training regarding the 11 interpretation of FEC? 12 13 I have no formal training. A. 14 Do you have any formal training in 15 relation to how the FRI is put together and in interpreting it? 16 No formal training in that regard. 17 Α. All right. When you say no formal 18 training, what training do you have in relation to the 19 use of the FECs? 20 Well, I have experience with Α. 21 reference to both FRI and the FECs through my work at 22 OFAH and my contact with, for example, MNR employees. 23 24 In addition to --Q. Have you ever attempted -- sorry. 25

In addition to my own personal, for 1 Α. example, reading in the area. 2 Had you ever had to use the FECs 3 4 operationally? No, I have not. Α. 5 6 MR. FREIDIN: If I could just have a 7 moment, Madam Chair. Q. In your term and condition 121 --8 pardon me, 161, this is the one again -- the 10 per 9 cent rule, is the one that indicates that, as I 10 understand it, if you don't have enough area in each 11 FEC type; in other words, if you don't have 10 per cent 12 of the total area in a particular FEC type in its 13 oldest age class, then you have to stop harvesting to 14 15 some extent; is that correct? 16 A. Yes. 17 Q. You have to stop harvesting in that 18 oldest age class for starters? 19 A. Yes. 20 0. And you would have to stop harvesting 21 in the second oldest age class and every age class 22 below that so that the total area of that particular 23 FEC on which harvest would be prohibited would equal 20 24 per cent of the total area in that FEC type; is that

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correct?

1	A. I think it would be easier if we
2	looked at No. 7 from yesterday's exhibit; that is the
3	graph titled Minimum Age-Class Distributions by FEC
4	Type for Biodiversity Scenario 3, Oldest Seral Stage
5	Shortage FEC 2.
6	If I could just briefly sum up again what
7	that graph shows, was that here there is a shortage of
8	acreage in the oldest age class No. 7. We had wanted
9	10 per cent of the total area of the FMU which was 40
10	square kilometres in the oldest age class of FEC 2, 10
11	per cent of the 40 square kilometres, four square
12	kilometres.
13	So the term and condition Mr. Freidin is
14	referring to, 161, therefore requires no cutting in the
15	oldest stands comprising 20 per cent of FEC type 2; 20
16	per cent of 40 square kilometres, eight square
17	kilometres. Therefore, no cut in age eight square
18	kilometres of the oldest age classes shown here, seven,
19	six and five. Total them up, you get eight square
20	kilometres.
21	That occurs that deferral, that no-cut
22	deferral again is in place until the 10 per cent rule
23	or four square kilometres is met in age class 7. So
24	this is a no-cut deferral until the 10 per cent rule
25	and the oldest age class No. 7 is met.

1	Q. According to this, if your age
2	classes are for the black spruce stand your age
3	classes, do they have any particular numbers to them,
4	20 years, 10 years?
5	A. I didn't have any particular numbers
6	in mind.
7	Q. Okay. Would you agree with me that
8	an assumption which is implicit in your 10 per cent
9	rule is that one is actually able to identify with some
.0	certainty that specific earlier successional stands
.1	will develop over time into a specific mature V type?
.2	A. Yes, there is an assumption that that
.3	co-relation exists.
4	Q. Okay. So you use a normal forest to
.5	describe how this would work I think in the answer to
. 6	OFIA No. 5?
.7	A. Yes, even aged.
.8	Q. Even aged.
.9	A. Yes, again, our proposal here, the 10
20	per cent biodiversity, is referring to even-aged
21	management conditions, the boreal forest.
22	As I said yesterday, we don't have a
23	proposal for the Great Lakes/St. Lawrence where
24	selective cutting, for example, is common.
25	Q. I think the example that you used to

1	answer that interrogatory was in fact a normal forest?
2	A. An even-aged.
3	Q. I think
4	A. I was using normal in the sense of
5	even-age class distribution.
6	Q. Even-age class distribution which
7	would mean if you have a hundred is that what you
8	meant, if you had an age class distribution going from
9	100 from zero to a hundred that you would have an
10	equal amount of area in each age class? Is that what
11	you meant by that answer?
12	A. Yes. As I state on page 14 of my
13	witness statement, the approache is an explicit
14	recognition that I said normal distribution meaning
15	even distribution of age classes.
16	Q. Okay. An even distribution of age
17	classes is what I have depicted in this little sketch?
18	A. Yes.
19	Q. You say that you always have to in
20	this case 10 per cent, if in fact the FEC goes from
21	zero to a hundred, okay, assuming that, 10 per cent of
22	the area would be half of this age class of 80-100?
23	A. Yes.
24	Q. So you would have to ensure in this
25	case you could cut the area in that age class which I

1	have marked or put some hash marks on in the oldest age
2	class?
3	A. Yes.
4	Q. In the next age class you would have
5	to make sure
6	A. So, again, this represents the total
7	area in the FMU
8	Q. That's right.
9	Aof this FEC, this particular FEC
10	and it represents the total area in the FMU devoted so
11	these ages class in the FEC, yes.
12	Q. Right. Now, because of your term and
13	condition 161 and the incentive you talk about and the
14	rationale, in the next age class you wouldn't be able
15	to harvest all of that, you would only have half of
16	that as well that you can harvest; is that right?
17	A. That is one, yes, potentially. Yes.
18	Q. Well, that's the whole idea behind
19	your whole scheme is that to make sure you don't
20	harvest more than half in that age class because you
21	want to leave half to move into your oldest age class
22	to meet your 10 per cent rule?
23	A. Yes. We want to ensure that the 10
24	per cent rule is met, yes.
25	Q. And that's what you would have to do,

1 you would have to not cut more than 50 per cent of your 2 next age class, next lowest age class, otherwise you 3 wouldn't have anything to move up? You wouldn't have 4 10 per cent to move up? 5 A. Let's suppose this is a hundred 6 square kilometres, so that would be 20 each. 7 MADAM CHAIR: Could we ask you to speak up, Dr. Quinney, for the court reporter. 8 9 THE WITNESS: Yes, sure. So in this 10 example if there were a hundred square kilometres in 11 the FEC type and --12 MR. FREIDIN: Q. A hundred square 13 kilometres in the FEC type. 14 Α. Yes. 15 Q. Okay. And the age classes chosen by Mr. 16 Freidin then --17 No, no. Well, I chose them because 0. 18 that's what you have put in your answer to the 19 20 interrogatory. 21 Α. We have 20 square kilometres in each of the age classes shown. 22 Q. Okay. 23 So our biodiversity target is 10 per Α. 24 cent in the oldest age class which is 10 square 25

1	kilometres.
2	Q. Right, that is this little part down
3	here which I got haven't got any hash marks in in that
4	oldest age class?
5	A. That's what we're aiming for.
6	Q. All right. I'm saying, that's what
7	you are aiming for. You have got the incentive as you
8	have described it in your rationale. If, in fact, one
9	wanted to harvest in this 60-80 age class it would be
1.0	limited to 50 per cent of that?
11	A. Mm-hmm.
12	Q. Because if you didn't limit your
13	harvest in that manner you wouldn't have another sort
14	of 10 kilometres, square kilometres, to move from the
15	60-80 age class into the 80-100?
16	A. Yes.
17	Q. Now, somewhere in your witness
18	statement you talk about having to determine the area
19	you may lose to fire?
20	A. Yes.
21	Q. What do you do in this scenario? Do
22	you on top of this thing say: I can't harvest any more

understand what you are saying, another area on top of this and saying: I may lose that to fire and if I lose

than that, but you also now have to work in, as I

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1	to that fire I'm having to have trouble meeting that 10
2	per cent in the oldest seral stage so that you now have
3	to in fact not harvest on an additional area in the
4	earlier age class? The earlier age classes being the
5	ones which are now younger 80.
6	A. Yes. The forest managers would have
7	to take into account, yes, the likelihood of fire in
8	destroying part of that age class, yes.
9	Q. All right. So that you are telling
10	me then to apply that rule in that age class younger
11	than the oldest not only would you have to reduce your
12	harvest, you would take into account this potential
13	loss to fire?
14	A. Yes.
15	Q. And other natural disturbances?
16	A. Yes. If I might add, Mr. Freidin,
17	this question is also answered in an interrogatory and
18	it is interrogatory No. 5 from OFIA.
19	Q. Okay. I think that answer is
20	consistent with the evidence you just gave?
21	A. Yes.
22	"In order to provide for areas of
23	intensive silviculture with shorter
24	rotations up to a maximum of 50 per cent
25	of each FEC land base was assigned to

1	this potential silviculture regime."
2	MR. O'LEARY: Which one is that, Dr.
3	Quinney?
4	THE WITNESS: OFIA No. 5.
5	MR. FREIDIN: Q. So in this particular
6	example that we have discussed up here, this graph that
7	we will mark as an exhibit in a moment, the rule
8	there is no question that the rule as you describe it
9	has an effect on wood supply in terms of providing wood
10	to the mills?
11	A. It could influence wood supply in
12	order to maintain the biodiversity target. It could.
13	Q. What happens if you are going along
14	here and, let's say, the manager is doing a great job
15	and he is trying to maintain all this, maintaining a
16	distribution that's going to make sure he always ends
17	up with 10 per cent in that oldest seral age and all of
18	a sudden there is a huge fire and it just burns across
19	this particular FEC, wipes out a lot of the area?
20	What happens to the 10 per cent now that
21	you are aiming at? Does it stay the same?
22	A. Yes, it stays the same. You want to
23	achieve that as soon as you could.
24	Q. Now, why does it stay the same? Why

does the 10 per cent -- well, does the 10 per cent stay

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the same, Dr. Quinney, because you are assuming that
when fire runs across that FEC that that whole area is
going to revert back into an earlier successional stage
which, if you leave it alone, nothing happens to it, it
is going to end up in the same FEC at maturity?

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A. Sorry, would you repeat that for me, please?

If fire goes through here -- well, if Q. you have a FEC out there, FEC No. 3, and you made a determination when we started your scenario, your 10 per cent rule, and you say: Okay, the total area in that FEC is a hundred square kilometres and that means I have got to have at least 10 square kilometres in the oldest age class. Let's say, you have got that and you are managing along and you are working very hard, very diligently to make sure that you have got 10 square kilometres coming on in the 60-80 so it will move up in the next 20 years and all of a sudden a fire comes along and wipes out 60 per cent of that whole FEC as described in the guides, you are telling me that you will always have 10 kilometres in that FEC type which has now been burned over and will not change; is that right?

A. What we are saying is that you would want to replace that 10 per cent so there would be a

1	deferral on harvesting until that was met.
2	So, for example
3	Q. So that
4	Awood supply would have to come from
5	another FEC.
6	Q. All right. When you say "until it is
7	met." Until it is met is the same 10 kilometres. You
8	are not going to change the 10 square kilometres
9	requirement for that particular FEC that you set the
.0	day you started your little 10 per cent rule system?
.1	A. Yes, over the entire FMU.
. 2	Q. You don't change the 10 square
.3	kilometres?
. 4	A. You don't change the 10 per cent. In
.5	this case, yes, 10 square kilometres over the entire
. 6	FMU.
1.7	Q. Right. Is the reason that you is
L8	the thinking that you are going through that says don't
19	change that 10 per cent because you believe that even
20	if this particular FEC gets disturbed, gets changed as
21	a result of fire that the whole area that was in that
22	FEC is going to go back in time and it's going to start
23	on the land base now and you will say: Gee, it is the
24	same land base and if we wait another 80 to 100 years

that will, without doubt, turn into the same mature

25

1	FEC?
2	Is that the thinking that you have gone
3	through to come up with your 10 per cent rule?
4	A. There is an assumption, yes, that the
5	succession pattern would eventually lead that mature
6	FEC stage.
7	Q. So you are assuming, therefore, that
8	on a given area of land, a given particular stand or
9	group of stands that happens to be in a particular
10	not stands, but if you have a particular FEC on a
11	particular piece of land, that if that piece of ground
12	is disturbed, whether it is by harvest, whether it is
13	by fire, whether it is by blowdown, whether it's by
14	insect and disease that that area is going to revert to
15	an early successional stage and it will, in fact,
16	through time turn into the same FEC that was disturbed?
17	I understand you to be saying that's the
18	thinking behind it?
19	A. Yes.
20	Q. Thank you.
21	MR. FREIDIN: Can we mark that as an
22	exhibit, Madam Chair.
23	MADAM CHAIR: Yes, we can. This will be
24	Exhibit 2094.
25	MR. FREIDIN: We can describe it as

1	simple description of Coalition's 10 per cent rule re
2	term and condition 161.
3	MR. O'LEARY: I think it's probably
4	closer to 160 rather than 161.
5	MR. FREIDIN: Well, okay, 160.
6 7	EXHIBIT NO. 2094: Hand drawn description of Coalition's 10 per cent rule reterm and condition 160.
8	MR. FREIDIN: Q. Could you turn to your
9	revised term and condition 161 which is part of Exhibi
10	2088, please.
1.1	Could you turn, please, to Exhibit 1532B
12	which is the Northwestern Ontario Forest Ecosystem
L3	Interpretation.
14	A. Yes.
L5	Q. And at page 1-8, please. Are you a
16	silviculturalist, by the way?
L7	A. No, I'm not.
L8	Q. So you may or may not be able to
19	agree with this statement, but at page 1-8 in this
20	document, right at the very bottom it says the
21	following in the last paragraph:
22	"There is considerable diversity among
23	vegetation components in northwestern
24	Ontario forests. Typically vegetation
25	development is influenced by past

1	disturbances; i.e., fire history of
2	natural stands. Successional pathways
3	can vary dramatically with the type or
4	severity of the disturbance and
5	the management treatments applied after
6	harvest."
7	Can you agree? Do you have the expertise
8	to agree or disagree with that statement, sir?
9	A. I can agree to that statement.
10	Q. Thank you. The answer is you can
.1	agree?
.2	A. Yes.
L3	Q. Thank you. Now, can you turn to 161,
L4	please, term and condition 161.
15	A. Yes.
16	Q. In that term and condition where you
L7	talk about the 20 per cent or the prohibition if you
L8	don't meet the 10 per cent rule, the rationale says
L9	this condition deals with two issues.
20	"First, due to historical circumstances
21	in the FMU either man or nature induced
22	the oldest seral state may be
23	under-represented."
24	What is the benchmark that you are using
25	or would be used for the purposes of determining that

1 the oldest seral state was under-represented? A. Well, that's in the context of the 10 2 3 per cent. O. What about when you start this 4 system? As I understand it, you want this 10 per cent 5 rule approach implemented fairly quickly; isn't that 6 7 right? Α. Yes. 8 9 Q. All right. And the reason for that, again, is to 10 11 ensure this minimal 10 per cent supply of the oldest age classes. We don't want to see a situation occur 12 13 where the oldest age classes are entirely removed. 14 Q. Right, and I understand the rationale 15 for it. But as I understand it, you have got to start 16 at time zero? The first time this rule is going to 17 apply somebody has to go out there and say: How much area falls into the 10 per cent, right? 18 19 Yes. Α. 20 As I understand what you are 0. 21 proposing, it is the public that are going to make that 22 decision; isn't that right? 23 No, Mr. Freidin. That's overly 24

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described to Mr. Martel yesterday, in Panel 9 we will

The public will play a role, but as I

simplistic.

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1	describe in detail how objectives for timber management
2	plans are determined; the role of the public, the role
3	of the various local citizens' committees, the role of
4	provincial level direction, the role of regional level
5	direction.
6	Q. All right. We will come back to that
7	in a minute, but somebody has got to decide what the 10
8	per cent is going to be? What area like, 10 per
9	cent is what area, that question has to be answered for
10	every FEC?
11	A. Yes.
12	Q. And you say here this condition
13	say is it possible that somebody pardon me.
14	This rationale, it says:
15	"The oldest seral stage may be
16	under-represent."
17	Does that question about whether the
18	oldest stage is under-represented come into play when
19	you initially determine what the 10 per cent will be?
20	Do you understand what I'm driving at?
21	A. Could you give me an example.
22	Q. Well, if you have a management unit
23	with a particular FEC and the oldest age class, the way
24	you have described it, is 100-120.
25	Let's say the day you start you have got

1	very, very little area, you have got two per cent of
2	the area of that FEC in the oldest seral stage, would
3	the application of your rule say you can't harvest that
4	two per cent and you can't harvest anything earlier
5	A. Not anything earlier. There would be
6	a deferrment on harvest until the 10 per cent was met.
7	Q. Okay.
8	A. A deferrment.
9	Q. Okay. I will leave the issue about
10	the public for a little later.
11	Could you turn, please, to page 3 of
12	Exhibit 2088. Those are your overheads.
13	MR. FREIDIN: Madam Chair, I am going to
14	start into a new area here. I would very much like to
15	finish today. I would like to suggest that we break
16	now and make it a very short break, short as possible,
17	whether that's half an hour or whether that is 45
18	minutes, but I want to finish today if I can.
19	MADAM CHAIR: All right. We will adjourn
20	and be back at a quarter to one.
21	MR. FREIDIN: Thank you.
22	Luncheon recess at 12:00 p.m.
23	On resuming at 12:45 p.m.
24	MADAM CHAIR: Please be seated.
25	MR. FREIDIN: Q. Dr. Quinney, can you

1	turn to Exhibit 2088, page No. 3. Have you got that?
2	A. Yes.
3	Q. Now, this particular document
4	entitled Schematic of the Elements of Richness in
5	Forest Biodiversity, I understand that you prepared
6	this to in fact to provide to the Board an
7	understanding of where FEC fits into the biodiversity
8	hierarchy. That was one of the reasons for doing that?
9	A. Yes.
.0	Q. I understand or I would assume that
1	your evidence is based on that particular evidence,
2	that understanding which you have conveyed?
.3	A. Yes.
.4	Q. Now, if you look at the third line of
.5	boxes from the top, Stands, am I correct that that
.6	refers to stands which are stands depicted on FRI maps?
.7	A. Yes.
.8	Q. And stands four, five and six have
.9	different species in them and that's why you say that
20	that line is indicating stand richness of those stands;
21	is that correct?
22	A. No, let me explain. For example, on
23	the left-hand side just below the forest landscape
24	level you see a forest FEC type 1
25	Q. Yes.

1	Awith three stands types leading
2	into it.
3	Q. Right.
4	A. Then below that leading into, for
5	example, stand 1 and stand 2 you see species 1 and with
6	reference to species richness, there I was thinking,
7	for example, that species 1 could represent warbler, it
8	being associated with stand types 1 and 2; species 3
9	warbler being associated with stand type 3.
10	The stand richness, stand 1, 2, 3, forest
11	FEC type 1 in this illustration, the richness of forest
12	FEC type 1 is based on being composed of three stand
13	types. The stands being
14	Q. All right, thank you.
15	A. Again, richness being number of types
16	present.
17	Q. Now, Dr. Quinney, I am going to
18	suggest to you that your schematic is a
19	misrepresentation of where a FEC fits into the
20	biodiversity hierarchy.
21	The basis of my suggestion is that rather
22	than a number of stands as you have described them
23	making up a FEC class it is just the another way
24	around, that FRI stands are composed of numerous FEC
25	types.

1	A. Sorry, would you repeat that for me,
2	please?
3	Q. All right. Let me put the
4	proposition to you. Would you agree with me, sir, that
5	FRI stands are composeed in almost all cases of
6	numerous FEC types? Do you agree with that
7	proposition?
8	A. I have considered a stand to be a
9	further subdivision of a FEC type
10	Q. That's what you have told me.
11	Aaccording to age.
12	Q. All right, according to age. So
13	stand 1, 2 and 3, explain to me what that means in the
14	context of this particular diagram?
15	A. Well, in the context of this
16	particular diagram you can see that the stand on the
17	left-hand side leading into to FEC type 1 is stand type
18	1 and leading into forest FEC 2 is stand type 5.
19	So what I'm saying is that forest FEC
20	type 1 consists of age classes of stand type 2.
21	Q. You told me that the stands
22	represented FRI stands. When we went through this and
23	we started out you said that the stands equal stands
24	that you would find on the FRI?
25	A. On an FRI map?

1	Q. That's what you said.
2	A. Yes. Different types of stands would
3	be found on an FRI map.
4	Q. Right. And
5	MADAM CHAIR: Excuse me, just for the
6	Board's clarification. The only mapping the Board is
7	aware of is an FRI base map where you would have the
8	stands identified by
9	MR. FREIDIN: Polygons.
10	MADAM CHAIR: Thank you, Mr. Freidin. Is
11	that what we are talking about?
12	THE WITNESS: Yes.
13	MADAM CHAIR: Those exact stands. All
14	right, go ahead.
15	MR. FREIDIN: Q. Let me make sure that I
16	read this correctly.
17	When you have a line going up from the
18	stand 1, 2 and 3 box going up to the forest FEC 1, that
19	can be interpreted or read one could conclude, put
20	it this way, that FEC 1 is composed of stands 1, 2 and
21	3
22	A. Sorry.
23	Q. Isn't that what you intended to show?
24	A. No, I intended to show, as
25	illustrated again, if we work from, say, the bottom

1	left-hand side to show an example of the elements of
2	the richness; that is number of types that you can find
3	in a forest landscape, you can start at the genetic
4	variation level. In other words, for example, a
5	sub-population level.
6	Q. I don't think we have to go from the
7	bottom/up. Can we just concentrate on the stand part.
8	How do you interpret that? Am I
9	supposed to interpret this are you saying to the
10	Board that the Board should read this and say that
11	three stands make up that FEC, one or only one of those
12	stands?
13	A. In this illustration, stand type 2.
14	Q. All right. And the other one it is
15	stand type 5 and FEC 2?
16	A. Yes.
17	Q. That's fine. I still go back and say
18	to you or suggest to you that the hierarchy is a
19	misrepresentation or it is certainly an extreme
20	simplification because you are suggesting by this
21	diagram that there is indeed that one stand would
22	equal one forest ecosystem classification?
23	A. It is a simplification and the
24	purpose, again, of it was to show the various elements
25	of richness that we can have in a forest.

1	Q. Let's talk about the real world for a
2	minute as opposed to your simplification.
3	Do you agree in the real world FRI stands
4	are almost invariably composed of more than one FEC
5	type, will contain more than one FEC type?
6	A. A given FRI map?
7	Q. An FRI stand, yes. Dr. Quinney, you
8	are making these recommendation about how FECs and FRI
9	maps should be correlated and how simple it will be and
10	we should do it right away.
11	Why are you taking so long to answer what
12	seems to be a basic question?
13	A. I'm taking the time that I am because
14	I have difficulty at times understanding your
15	questions.
16	Q. All right. I apologize if my
17	question is this particular case was unclear, but I
18	thought it was very clear. So you take as much time as
19	you require.
20	A. Yes, FRI maps can contain more than
21	one FEC type.
22	Q. And it is common that a geographical
23	area shown on an FRI map as an FRI stand does contain
24	more than one FEC type; isn't that true?
25	A. Yes, I believe so.

1	MR. FREIDIN: If I could just have one
2	moment, please.
3	Q. Now, could you turn for a moment to
4	Exhibit 2091. It is one of the many documents that the
5	Ministry of Natural Resources gave you recently.
6	A. Can you tell me the title of it,
7	please?
8	Q. Yes, it is the Proposal for a
9	Wildlife Habitat Inventory Program, Discussion of
.0	Rationale.
.1	A. Yes.
.2	Q. In your evidence you refer to page
.3	27. Can you please turn to that page.
4	A. Yes.
.5	Q. Now, on that particular page you
.6	referred in your evidence to a paragraph, the fourth
L7	paragraph - it actually has got a number 4 there - and
.8	you refer starting in the second line to the portion
L9	that says:
20	"FECs although they can be mapped using
21	FRI information as well as information
22	from other mapping tools available such
23	as the prime land inventory."
24	It was in the context of your evidence
25	that, in fact, these FRI maps, that there be a

correlation in fact created so that you will turn FRI 1 maps into FEC maps. Am I correct that it was in that 2 context that you referred to that particular quote? 3 That FRI information can be used to 4 map FECs, yes. 5 6 You are suggesting, sir, as I 7 understand your evidence, that to do that is a fairly 8 straightforward matter which should take little time 9 indeed and should not delay the time schedule you are 10 proposing for your 10 per cent rule; am I right? 11 Well, in terms of the time frames to 12 implement our proposal, they are in the terms and 13 conditions, but, yes, my evidence has been that I agree 14 with what Dr. Baker has stated there, that FRI 15 information can be used to generate FEC mapping. 16 Q. Right, but would you turn to page --17 pardon me. Don't put that document away because I am 18 going to go back to it, but would you also open up the 19 interrogatories, Exhibit 2087, at MNR interrogatory No. 20 14. 21 Again, Madam Chair, I apologize that I 22 don't have the right page number. 23 MR. HANNA: Page 20. 24 Page 20. MR. FREIDIN: 25

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MADAM CHAIR: Thank you.

1		MR. FREIDIN: Q. You see that we are
2	talking here a	about now about your suggestion that
3	things can be	done quickly and practically.
4		The question arose out of your witness
5	statement which	ch said:
6		"I believe that these maps could be
7		quickly and practically developed at an
8		initial rudimentary level using the
9		existing FRI maps. What is required is
10		for the managers responsible for each
11		forest management unit to develop a
12		correspondence between FEC site types and
13		FRI maps."
14		We asked you what was involved in that
15	and you say:	
16		"Developing a correspondence between FEC
17		types and FRI maps could be done by
18		simply having the local unit foresters
19		running down a list of FRI categories and
20		based on existing knowledge simply
21		assign a corresponding FEC type."
22		Now, you stand by that evidence; do you
23	not?	
24		A. Yes, and
25		Q. Was it

1	Athat this can be a refined over
2	time and I believe that to be consistent with Dr.
3	Baker's statement.
4	Q. It can be refined over time, but I am
5	more concern about the level of refinement that we can
6	get now so that we can determine how reasonable your
7	suggestion is that we start now with a 10 per cent rule
8	based on some understanding of the amount and location
9	of FECs. That's where my questions are going.
L'0	Now, is the context I assume, sir,
11	that you referred to this page of Exhibit 2091 as
1.2	support for the proposition that I just read to you
13	from MNR 14 and that is, that it would be a fairly
L4	this can be done by simply having a local unit forester
15	so what you have suggested here. You suggesting it was
16	simple.
L7	Is that why you referred to page 27? It
18	is so simple we can do it now so let's get on it with
19	it?
20	A. Please remember the entire context of
21	my statement.
22	Q. Which statement are you referring to?
23	A. I'm referring to the quote I believe
24	that these maps can be quickly and practically
25	developed at an initial rudimentary level.

1	Q. But how rudimentary a level, Dr.
2	Quinney?
3	A. To proceed.
4	Q. How do you know that you what's
5	the rudimentary level? What's the product, Dr.
6	Quinney, of doing it the way it has been done up to
7	this point in time?
8	A. The product is going to be FEC
9	mapping and, again, it's my understanding from people
10	like Dr. Baker's writings and others that these initial
11	rudimentary level attempts are being made.
L2	Q. Well, Dr. Quinney, don't you agree
13	that there may even be levels of rudimentary that it
L4	may be so rudimentary it wouldn't help you one little
L5	bit in terms of your biodiversity objective, or it
L6	might be more sophisticated and it might give you a
L7	little bit, or it might be really sophisticated and it
L8	would achieve all of your biodiversity objectives?
L9	I mean, isn't there a continuum like that
20	in terms of the level that you can map FECs?
21	A. There is a continuum which you can
22	map them, but
23	Q. Is there a level at which
24	MR. O'LEARY: Are you going to let him
25	finish his response?

1	MR. FREIDIN: All right.
2	Q. Finish your comment, please.
3	A. Dr. Baker's information, in addition
4	to that of others, clearly demonstrates that these
5	things can proceed using the best available knowledge.
6	MR. FREIDIN: Q. Does Dr. Baker in this
7	statement I suggest to you nowhere in there does he
8	say how fast this can be done, how fast it should be
9	done, whether in fact it can be done at a stage where
LO	you can actually start using it operationally now? He
11	doesn't say that there, does he?
12	A. Agreed. He does not put
13	Q. All right. And pardon me?
1.4	A. Agreed. He does not put a time frame
15	on it.
16	Q. But you are putting a time frame on
17	using this stuff. You are saying start right now with
18	some rudimentary mapping?
19	A. Using the best available information.
20	Q. Don't you agree with me, sir, that
21	there has got to be a line beyond you know, if I
22	just drew a map up here and I could show you the whole
23	management unit was one, FEC although we knew there
24	were probably 36 in there, that wouldn't do you any
25	good for management purposes in achieving biodiversity.

1	would it? It would be a rudimentary map, but would it
2	be of any use to you?
3	A. It would depend specifically on what
4	I wanted to achieve.
5	Q. I want you to achieve your objective
6	of managing for biodiversity.
7	A. Yes, and I believe we can do that.
8	Q. You could do that in a situation
9	if the rudimentary map that you were able to create -
10	and this is hypothetical - if the rudimentary map that
11	you were able to create only had one FEC type for the
12	whole unit but you knew there was probably 25 or 35,
13	you wouldn't use that map for the purposes of your 10
14	per cent rule, would you?
15	A. The key to
16	Q. Would you?
17	A. The key is to use the best available
18	information.
19	Q. So you would start that's the best
20	information so you would start with that kind of
21	information just because it was the best you had?
22	A. Management decisions are being made
23	every day, Mr. Freidin. I will use the best I had
24	available
25	Q. In the context of your proposal

--and I would refine it over time. 1 Dr. Quinney, you are telling me that 2 if the resolution at which you could do that was that 3 gross that you believe adaptive management is so 4 important that it is reasonable and practical to start 5 off managing for biodiversity when that is the level of 6 information you have got? 7 Yes, Madam Chair, I do. 8 Α. 9 Q. All right. 10 A. And part of the reason I believe 11 that's important is because, for example, in MNR's 12 terms and conditions they don't address this important 13 question. We have attempted to address it and proceed. 14 Would you agree, sir, that there is a Q. 15 difference between an acknowledgment of the importance 16 of biodiversity and saying: I know enough about this 17 subject that I can start doing something operationally? 18 Is there a difference between those two 19 things? 20 Is there a difference between what A. 21 two things? 22 Q. Is there a difference between someone 23 saying: I acknowledge that sustaining biodiversity is important, and someone on the other hand saying: I 24 think sustaining biodiversity is important and I have 25

1	got enough information to start doing something
2	operationally about it?
3	A. I agree with the latter.
4	Q. Well, no, no. It is not agreeing
5	with the latter. I gave you two things and are they
6	the same or aren't they? I don't care whether you
7	agree with one of them or not.
8	A. No, they are not the same and because
9	management is occurring in the area of the undertaking,
10	because timber management activities are influencing
11	biodiversity, then they should we should be managing
12	for it starting now.
13	MR. MARTEL: Where do you start with
14	the where do you come up with the appropriate 10 per
15	cent then?
16	THE WITNESS: You start for a given FEC
17	type.
18	MR. MARTEL: No, but if
19	THE WITNESS: Sorry, in terms of our
20	terms and conditions we have said where the FEC mapping
21	has already occurred in
22	MR. MARTEL: You are missing my point.
23	If you don't know what the overall make-up is, how do
24	you determine then where you maintain the 10 per cent?
25	THE WITNESS: Could I refer to our terms

1 and conditions? MR. MARTEL: Yes. 2 3 THE WITNESS: According to term and condition 158, No. 1, we would like to see that 4 classification system expanded to areas of the 5 undertaking that aren't prensently completed within 6 7 three years. For those that have been completed, we are asking to start that 10 per cent right away. 8 MR. FREIDIN: Q. You are assuming that 9 10 you are able to map or prepare a FECT map as a pre-condition to doing the 10 per cent, right? 11 12 Α. Yes. 13 And that's what I was talking to you 14 about. It is a pre-condition to this 10 per cent rule 15 that you be able to map FEC. 16 I am trying to find out whether the 17 degree to which you can map FEC is such that it makes 18 any -- that there is any need to or is it reasonable to 19 start your 10 per cent. 20 I am going to cross-examine you, sir, ask 21 you questions which are designed to suggest that the 22 degree of resolution, the degree to which you can 23 actually map FEC is not at the stage where it would be 24 reasonable for the Board to accept your 10 per cent

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biodiversity approach. That's where I'm going.

25

1	usually don't tell witness where I am going, but that's
2	where I am going.
3	A. I disagree, Mr. Freidin, because it
4	is better to do something now in the right direction.
5	Q. All right. Let me explore that with
6	you.
7	MADAM CHAIR: Mr. Freidin, it will be
8	more helpful for the Board if you can point us to a FEO
9	map.
10	MR. FREIDIN: There are no FEC maps.
11	MADAM CHAIR: The diagrams in Exhibit
12	1532 are by way of examples, they are illustrative
13	rather than
14	MR. FREIDIN: They are illustrative. I
15	think the witness has agreed Well, there are none.
16	Q. You would agree, sir, there are no
17	FEC maps at the moment, maps which show you where on
18	the landscape particular FECs are?
19	A. I have not seen any.
20	Q. Of course you haven't. What you are
21	saying is you would like to take the FRI maps and
22	somehow do a correlation or use your best efforts to
23	turn them into FEC maps? That's your position, right?
24	A. Yes.
25	Q. And you have indicated to me and to

1	Forests for Tomorrow that you don't have any particular
2	expertise in let's go right back to it.
3	A. The integration of FRI and FEC.
4	Q. You don't have any particular
5	expertise?
6	A. Formal training.
7	Q. You do not personally have training,
8	you said was your answer. The question was:
9	"Describe the witness' personal
LO	knowledge, training and experience
11	regarding the integration of FRI and FEC
12	information."
1.3	Now, when that question was asked, sir,
L4	integration of FRI and FEC information was the
15	integration for the purpose of producing FEC maps,
1.6	wasn't it?
17	A. Yes.
18	Q. You said:
19	"I do not have personally training
20	regarding the integration of FRI and FEC
21	information, but I know that it's being
22	done in Ontario."
23	I assume, sir, based on your evidence
24	that when you said "I know it is being done in
25	Ontario", it's reliance on statements such as the one

1 made by Mr. Baker in Exhibit 2091 that we have been 2 referring to; is that right? 3 A. That's one element, but, for example, 4 I have information with reference to, you know, MNR's 5 northern region that they are doing it. 6 Q. Well, what, Mr. Watt, Phoenix, and 7 Racey? 8 A. Sorry? 9 0. The works of Mr. Watt, Phoenix and 10 Racey, is that what you are referring to? 11 Α. I believe Mr. Watt is involved. 12 Right. Do you know Mr. Racey? Q. 13 Yes, Mr. Racey is here today. Α. He is. The gentleman here with the 14 Q. 15 beard. In fact, I suggest to you that he is the 16 17 Mr. Racey that Mr. Baker cites on page 27 of Exhibit 2091. If I tell you that's the case are you willing to 18 19 accept that? 20 Α. Yes. In fact, when you relies on this 21 Q. statement of Mr. Baker for your purposes did you take 22 the time to read the paper that was referenced? 23 A. I was handed a copy last night by 24 25 MNR.

1	Q. Right, because you knew I was going
2	to ask you some questions about that and I am going to.
3	Did you read the paper that Mr. Baker
4	cited before you gave your evidence?
5	A. No. We did try and obtain a copy.
6	When I received Mr. Baker's package Friday afternoon we
7	did try and obtain a copy of that paper, and I believe
8	it was faxed to my office Tuesday afternoon, but I had
9	not been able to read it. I was able to look at the
. 0	copy that MNR provided me with last night.
.1	Q. So you relied on this general
. 2	statement by Mr. Baker about mapping FECs using FRI
.3	information and didn't read the paper and you believe
. 4	it can be done to a degree of resolution where it would
.5	be helpful in terms of achieving your purposes?
. 6	A. Useful. Over the last two years with
.7	my involvement in the various technical committees and
.8	my travels to various MNR districts and conversations
.9	with MNR people, yes, from that I have conclude that we
20	can proceed.
21	Q. Okay. We will probably have a
22	disagreement on that even after asking these questions,
23	but let's make sure that we have the facts before the
24	Board.
25	Do you have the Racey paper? It is a

1	document entitled Using Forest Ecosystem
2	Classifications to Facilitate Habitat Inventory.
3	I would asked it be made the next
4	exhibit, please.
5	MADAM CHAIR: This paper will become
6	Exhibit 2095. The title being Using Forest Ecosystem
7	Classifications to Facilitate Habitat Inventory,
8	authors Dean Phoenix and Jerry Racey.
9	THE WITNESS: Can you tell me the date,
10	Mr. Freidin?
11	MR. FREIDIN: I am not sure whether there
12	is a date noted on it.
13	MADAM CHAIR: It says November 15th, 1990
14	in the upper left-hand side, but that looks like a fax
15	transmittal number or something.
16	THE WITNESS: I was just interested in
17	when the paper was written.
18	MADAM CHAIR: It is as recent as 1990.
19	MR. FREIDIN: The cite pages are 1990.
20	Mr. Racey advises me at the present time
21	that his best information is that it was completed in
22	early 1991.
23	EXHIBIT NO. 2095: Document entitled Using Forest Ecosystem Classifications to
24	Facilitate Habitat Inventory, authors Dean Phoenix and Jerry
25	Racey.

1		MR. FREIDIN: Q. Now, if we look at this
2	document, wou	ld you turn please to page No. 3.
3		A. Yes.
4		Q. And you will see there is reference
5	to the Kapusk	asing example. There is some work being
6	done which is	described in this paper as Kapuskasing
7	which starts	on page 3 and an example from northwestern
8	Ontario which	starts on page 4. If we go to page 3
9		A. Yes.
10		Qand we go to the second paragraph
11	under the Kap	uskasing example, am I correct, Dr.
12	Quinney, that	this was basically a paper describing
1.3	attempts at m	aking correlations between FRI and FEC for
14	purposes of p	roducing well
15		A. Yes, using
16		
		Q. That was the intent?
17		Q. That was the intent?Aforest ecosystem classifications to
17	facilitate ha	
	facilitate ha	Aforest ecosystem classifications to
18		Aforest ecosystem classifications to bitat inventory.
18		Aforest ecosystem classifications to bitat inventory. Q. Right. In the second paragraph under
18 19 20		Aforest ecosystem classifications to bitat inventory. Q. Right. In the second paragraph under ng example, it says:
18 19 20 21		Aforest ecosystem classifications to bitat inventory. Q. Right. In the second paragraph under ng example, it says: "A forestry consultant was retained to
18 19 20 21		Aforest ecosystem classifications to bitat inventory. Q. Right. In the second paragraph under ng example, it says: "A forestry consultant was retained to develop an FRI/FEC relationships. This

1		of FRI stands and prime land inventory.
2		A key or algorithm was then developed
3		based upon actual observed relationships
4		between FEC OGs and existing forest
5		cover."
6		What's a FEC OG, Dr. Quinney?
7		A. I don't know what that acronym stands
8	for. Operation	onal group.
9		Q. What's a FEC operational group, Dr.
.0	Quinney?	
.1		A. I don't know.
.2		Q. You don't know. You are giving
.3	evidence about	t what can be done about transposing FRIs
. 4	into FECs and	you don't know what an operational group
.5	is?	
.6		A. That's correct.
.7		Q. An operational group, Dr. Quinney, is
.8	in fact	
.9		MR. O'LEARY: Is this part of a question?
20		MR. FREIDIN: Yes.
1		Q. I am suggesting to you, maybe you
22	can't confirm	this, sir, that an operational group
23	you didn't kno	ow that an operational group is a
24	description of	f a conglomeration of a number of
25	vegetation gro	oups which exist in the Clay Belt?

1	A. Yes, I don't know what
2	Q. If you don't know then I guess is
3	your evidence about how easy all this stuff is going to
4	be the basis of reading some generalized statements and
5	sort of saying something is being done about it in
6	Ontario?
7	A. Sorry, was that a question?
8	Q. I'm assuming that that's the only
9	basis of your evidence?
10	A. Sorry, what's the only basis?
11	Q. Let me change the question. Dr.
12	Quinney, for someone who has got some experience in
13	this area would suggest that there are these
14	difficulties, these problems, these complexities to
15	doing what you are suggesting; i.e., turning FRI maps
16	into FECs, I take it from what you have said to me in
17	the last 15 or 20 minutes that you no expertise
18	whatsoever to dispute their evidence and I am talking
19	about evidence given by people who work with FECs and
20	know them?
21	A. All I can say is that I have been
22	told by an MNR employee, as an example, that it is
23	being done in northern region with better than 80 per
24	cent accuracy.
25	Q. Well, I won't worry about that.

1	Let's keep go	ing. It says:
2		"The end result of this algorithm was a
3		series of complexes containing varying
4		proportions of OGs" operational
5	groups,	
6		" with only a few of the operational
7		groups (3) comprising most (70 per cent)
8		of any one complex."
9		Do you understand what that means?
10		A. Yes.
11		Q. All right. What does it mean?
12		A. "The end result of this algorithm
13		was a series of complexes containing
14		varying proportions of the OGs with only
15		a few of the operational groups
16		comprising most of any one complex."
17		Q. Can you sort of turn that into
18	English for m	e? I mean, the public are going to have
19	to make these	choices.
20	,	A. That very few of the operational
21	groups, very	few comprised most of the complexes.
22		Q. Which means that you could have areas
2 3	out there	what's a complex? Let's break this down.
24	What's a comp	lex?
25		A. In this context I don't know what the

complexes making up the algorithm are. I don't know. 1 O. What's the relationship between 2 operational groups and vegetation types? 3 A. I don't know that, Mr. Freidin. 4 So you wouldn't know whether an 5 Q. operational group was composed of a number of veg 6 7 types? A. No, I would have to probably read the 8 9 paper in its entirety. 10 Well, I gave it to you last night. MR. O'LEARY: At 11 o'clock. 11 MR. FREIDIN: Q. Didn't you read it in 12 13 its entirety? 14 A. No, I wasn't able to. 15 Q. All right. I don't think you are 16 really suggesting that you could understand that if you 17 read the whole paper, are you? Is that what you are 18 suggesting? 19 A. Given a sufficient amount of time and 20 other sources available to me, yes, I could. 21 Q. It would be a learning experience? 22 A. A lot in life is a learning 23 experience, Mr. Freidin. 24 Q. Can you agree or disagree with the 25 proposition that from what they did that the best that

1	they could do from the FRI was to generate a map of
2	complexes?
3	A. I can't agree or disagree without
4	going through the entire paper in detail.
5	Q. Well, maybe somebody else will have
6	to explain it.
7	MR. MARTEL: If you could explain it to
8	us so we could understand it, Mr. Freidin.
9	MR. FREIDIN: I can't give evidence as
10	much as I would like to explain to, but it will have to
11	be explained to you by someone else.
12	Q. Did you read the Forest Ecosystem
13	Classification Clay Belt book? Have you ever looked at
14	it? First, have you ever looked at it?
15	A. The Clay Belt book?
16	Q. Yes.
17	MADAM CHAIR: Which exhibit number, Mr.
18	Freidin?
19	MR. FREIDIN: I'm sorry, Exhibit 330.
20	THE WITNESS: I believe I have seen it,
21	but it has been a long time.
22	MR. FREIDIN: Q. You saw it. Did you
23	read it when you saw it?
24	A. I have not read it cover to cover.
25	Q. How much time did you spend with it?

How much time do you think you have spent reading and 1 trying to understand Exhibit 330? 2 3 A. Not very much time. Q. Not very much time. How much time 4 have you spent -- what about the same questions for 5 Exhibit 1532A and B? Have you seen those before? 6 7 Α. Yes. Have you read them both? 8 Q. 9 A. Yes. 10 Q. How much time have you spent doing 11 that? 12 A considerable amount of time. Α. 13 Q. Give me a rough -- when did you start 14 reading these? 15 A. When were they published? I can 16 recall MNR handing out copies at one of the timber EA 17 related committees I have been on and it was well over 18 a year ago. I can't remember when it was published. 19 They handed them out. So I read it as soon as it was 20 available. 21 Q. Now, if a complex of operational 22 groups is analogous to a working group as used at the 23 present time for timber management purposes--24 Α. Yes. 25 Q. --what would you say to the

1	proposition that continuing to follow the timber
2	management approach of working groups would give you
3	just about the same thing in terms of distribution and
4	effect on FEC types as managing based on complexes of
5	operational groups?
6	A. Would I say it would result in the
7	same?
8	Q. Yes. Would it be substantially
9	different? Would it be different at all?
10	A. I don't know.
11	Q. As I understand your whole approach
12	to biodiversity, it would be important to know the
13	proportion of each veg type within the management unit?
14	A. Yes.
15	Q. And if official pardon me. If
16	operating groups were in fact an amalgam or contained a
17	number of V types, that you would have to know the
18	location of those operating groups to manage on the
19	basis that you are suggesting?
20	A. Yes, I believe so.
21	Q. One last question on FECs. Have you
22	considered as part of your as part of the
23	development of your proposal for biodiversity and the
24	10 per cent FEC rule, et cetera, have you considered
25	what happens if 10 per cent in the oldest seral stage

1 of one FEC is an early successional stage of another FEC type? Do you understand my question? 2 Yes, I understand it. Α. 3 Just so everyone understands it. You 4 have a FEC type that's described in the FEC document, 5 it is a mature stand, it is given a number, V36 and 6 when it stopped being V36 it doesn't revert back to an 7 earlier time zero, it becomes an older stand and turns 8 into V20. 9 Now, have you considered or did you 10 consider when you came up with your rule what would 11 happen in a situation like that? 12 13 No, sir. A. 14 Can you confirm for me, sir, that 15 that happens in the real world? 16 I don't know. 17 0. Thank you. I want to deal briefly 18 with some of your evidence, Dr. Quinney, that there is 19 a reduction in biodiversity going on in Ontario which 20 is significant, as you have suggested in certain 21 portions of your evidence. 22 Now, one of the questions that the Board 23 asked and you dealt with in your evidence, in fact it 24 was the very first one where the Board referred you to

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page 10 and 11 of your witness statement about

25

1	biodiversity and about reports from Atlantic Canada and
2	you were asked whether there was any evidence about
3	anything similar occurring in Ontario.
4	You very quickly referred to Forests for
5	Tomorrow No. 6 and MNR 5(b) and moved on. I would like
6	to take a little time and look at what those answers
7	really say in answer to the question.
8	A. Yes.
9	Q. First of all, if we look at Forests
10	for Tomorrow No. 6. The answer that you gave about how
11	do timber management activities reduce biodiversity
12	have you got that?
13	A. Yes.
14	Q. Was a groundrule, a silvicultural
15	groundrule in the Red Lake Timber Management Plan for
16	the 1992 to 1997 term where a mixedwood site was going
17	to be changed or converted to a conifer dominated
18	stand?
19	A. Yes.
20	Q. MNR 5(b).
21	A. MNR 5(b).
22	Q. You were relying on those two papers
23	of Mr. Welsh as being evidence that biodiversity is
24	being significantly reduced?

A. Yes.

25

1	Q. And in FFT No. 4 you were asked for
2	Ontario examples and you referred to the Thompson
3	article in New Brunswick; is that correct?
4	A. Yes.
5	Q. And the Thompson article in New
6	Brunswick, is that the Thompson article which was
7	attached to your witness statement?
8	A. It is behind Tab 16 of the witness
9	statement.
10	Q. Would you turn to that, please.
11	A. Yes.
12	Q. That deals with marten in eastern
13	Canada somewhere; is that right, east coast,
14	Newfoundland and Nova Scotia? It didn't deal with
15	Ontario?
16	A. Dr. Thompson in the last sentence of
17	his abstract states that:
18	"Other larger jurisdictions in Canada
19	should closely examine their forest land
20	management plans in view of the Atlantic
21	experience."
22	Q. That doesn't say that biodiversity is
23	being significantly reduced in Ontario because of
24	timber management activities, does it?
25	A. He is not providing primary evidence

1	on marten in Ontario in this paper, that's correct.	
2	Q. Nor is he suggesting that	
3	biodiversity it being significantly reduced in those	!
4	other jurisdictions either, is he?	
5	A. But he is not suggesting the oppos	ite
6	that he it is not.	
7	Q. But you are suggesting in your	
8	evidence, and I quote you:	
9	"In some cases biodiversity is being	
0	significantly reduced due to timber	
1	management activities."	
2	When we asked you for area of the	
.3	under pardon me. You were asked:	
4	"Using Ontario examples"	
5	FFT said:	
6	"Using Ontario examples or case studie	s
.7	please specify how changes in forest	
.8	habitat caused by timber management ha	ve
.9	caused important species to decline."	
0	You went to New Brunswick?	
:1	A. No, I don't think that's correct.	
2	Q. Take a look at FFT 4. Do you have	<u> </u>
	the interrogatory for Forests for Tomorrow No. 4?	
14	A. Yes, I do.	
25	Q. It was because you referred to the	,

1	Thompson article that I have gone to it. I have
2	interpreted your answer of saying: Hey, here is an
3	example of what's going on in Ontario.
4	Can we agree that Dr. Thompson is not
5	suggesting that what he is talking about happening or
6	has happened in Newfoundland, Prince Edward Island and
7	New Brunswick is or has happened here?
8	A. He has not said it hasn't happened
9	here. He has not said it has happened in Ontario, yes
. 0	that's correct.
.1	Q. So your evidence in the form of the
. 2	interrogatory response, when you were asked to specify
.3	how changes in forest habitat caused by timber
. 4	management have caused important species to decline,
.5	really your answer should be at least the Thompson
.6	article doesn't provide any information about that at
.7	all?
18	A. If provides a suggestion.
19	Q. All right, a suggestion. So your
20	witness statement or your answer then is a bit of an
21	overstatement?
22	Never mind, your evidence stands for what
23	it is.
24	Just before we leave it, can we turn to

25 139 of that article, Tab 16?

_	A. Yes.
2	Q. In the right-hand side, in the second
3	paragraph, do you agree that Mr. Thompson has said:
4	"Elsewhere in eastern, in Ontario and
5	Quebec marten habitat may also become a
6	contentious issue. However, those
7	provinces are large and time remains to
8	assess habitat supply."
9	That's what it says. You would agree
10	that that's a little bit different than saying it has
11	happened?
12	A. Well, no, I wouldn't agree because
13	remember the context of Dr. Thompson's remark there.
14	It's the Ontario province as a whole. There could very
15	well be site specific areas in the area of the
16	undertaking, specific FMUs, there could be, where in
17	fact older age classes and patch sizes are not good for
18	marten.
19	Dr. Thompson is making that in that
20	context of an across-the-province statement. His
21	statement on a site specific basis might be quite
22	different.
23	Q. Okay, thank you. Would you go back
24	to MNR 5. I guess this is going to appear on two
25	different pages. I want to ask about 5(a) and I want

1	to ask about 5(b).
2	A. Yes.
3	Q. Dealing first with 5(a). That
4	question arises out of your evidence where it says:
5	"There is considerable evidence that the
6	biodiversity at our forest at all four
7	levels I have described is being altered.
8	In some cases, biodiversity is being
9	significantly reduced due to timber
10	management activities. The potential
11	increases as silviculture intensifies."
12	A. Yes.
13	Q. We asked to identify intensive
14	silviculture and indicate in what part of the area of
15	the undertaking, if any, that occurs?
16	A. Yes.
17	Q. You described intensive silviculture
18	in your answer to 5(a) as:
19	"Harvest followed by heavy site
20	prepartion, artifical regeneration,
21	tending, protection" et cetera,
22	"on an ongoing and active basis
23	designed to produce a high yield of trees
24	species in a relatively short rotation."
25	A. Yes.

1	Q. Dr. Quinney, if you are harvesting a
2	conifer dominated stand, a hardwood stand, do you agree
3	that you may have to use intensive silviculture to
4	replace that conifer content?
5	A. Yes, I could see that that might be
6	necessary if that was your intention.
7	Q. All right. If, in fact, your
8	intention of doing that, that stand would have a FEC
9	type before you harvested it?
10	A. Mm-hmm.
11	Q. And if you wanted to return that
12	stand to rotation from then to the same condition as
13	closely as possible, I guess you could describe what
14	you were trying to do is trying to return the area back
15	to the same FEC unit that existed there before you
16	harvested it, right?
17	A. All right.
18	Q. And, therefore, by your approach then
19	or by your definition, in that particular case you
20	would actually need intensive silviculture to maintain
21	biodiversity on that site?
22	A. There may be examples where that
23	could occur, yes.
24	Since you mentioned 5(b), could I provide
25	a couple of specific examples from those papers for the

1	Board?
2	Q. Well, I don't need them. If the
3	Boards wants them, that's fine.
4	MADAM CHAIR: From which paper was that,
5	Dr. Quinney?
6	THE WITNESS: In response to
7	interrogatory No. 5(b) from Forests for Tomorrow.
8	Sorry, 5(b) from MNR.
9	MADAM CHAIR: You are talking about page
10	16 of Exhibit 2087?
11	THE WITNESS: Yes.
12	MR. FREIDIN: Q. What article are we
13	looking at again? I always have trouble keeping up.
14	A. I would just like to read one quote
15	from each of the Welsh much papers mentioned there.
16	Q. All right. Which is the first one?
17	A. First the impact on bird populations
18	of harvesting the boreal mixedwood forest.
19	Q. Yes.
20	MADAM CHAIR: Which tab is that in your
21	witness statement?
22	THE WITNESS: That was entered yesterday
23	as an exhibit.
	·

MADAM CHAIR: Okay.

MR. FREIDIN: Exhibit 2093.

24

1	į	THE WITNESS: I would just like to refer
2	your attention	to page 161, fourth full paragraph,
3	second last ser	ntence:
4		"As that portion of the boreal forest
5	7	which is cut over grows populations of
6	:	late succession species will continue to
7		decrease."
8	ŗ	That's an example of decreasing
9	biodiversity.	
. 0	1	MR. FREIDIN: Q. And what does he go on
.1	to say?	
.2	1	A. "At the present time we do not know
.3	7	what the critical population sizes are,
.4	1	out clearly we will have to monitor
.5	1	population status carefully."
1.6	•	Q. Okay. What's the other article we
17	want to	
18	i	A. Yes, it is in a tab behind the
L9	witness stateme	ent. Dr. Welsh's it is behind Tab 17.
20	. (Q. Yes. That's one you referred to in
21	your evidence-	in-chief?
22		A. Yes, I did. Again, I apologize for
23	the page number	ring in this because of fax
24	transmissions,	but I am on the page it is the page
25	immediately for	llowing a page full of diagrams, black

have to be adjusted to the forest

1		ecosystem goal for the site rather than
2		to maximize harvesting efficiency and
3		planning."
4		Q. Okay, thank you. Can I go on now?
5		A. Yes.
6		Q. Don't put that article away because I
7	wanted to take	e you to another part of it.
8		A. Yes.
9		Q. The last paragraph.
0		A. In the paper?
1		Q. Yes. I want to take you back because
2	I want to see	what Mr. Welsh or Dr. Welsh suggests as
3	compared to t	he Federation proposal to institute
4	something ope	rationally now on all the management units
5	where there is	s a FEC. I want to contrast what he says
6	to what your	suggestion is. He says:
.7		"I am the last one to suggest that the
.8		approach I am promoting will solve all of
.9		our problems, but I am convinced that
0		it would allow us to take a giant step
1		forward from where we are now and it
2		allow us to much more sensitive in
13		meeting the responsibility to care for
4		our planet. Much of what we need to know
:5		will only be learned adaptively along the

1	way."
2	Let's go on and see what he means by
3	that.
4	"I see few reasons not to get started
5	immediately. As a first goal for the
6	next four years we could consider a
7	network of model forests across the range
8	of major forest regions of Canada each
9	manageed on sustainable development
.0	principles to the conservation of
.1	biological diversity."
. 2	Now, would you agree with me that he is
.3	not advocating the implementation of an approach which
4	is going to be have to be operationalized
.5	immediately on all areas under management in any
.6	province in the country? He is talking about a couple
.7	of them.
.8	A. No, I wouldn't agree with your
.9	statement.
20	Q. Well, when he says the first goal for
21	the next four years would be to consider a network of
22	model forests, do you think that's the same as your
23	plan to operationalize an approach on every management
24	unit in the province, this province?
25	A. Well, Dr. Welsh has stated the first

- 1 goal. He may have several goals. It is my 2 understanding that the Board will personally hear from 3 Dr. Welsh in these hearings and you can ask him. 4 Q. I'm not sure -- I hope the Board 5 will or somebody will, but I have got your evidence as 6 to how you interpret that. Thank you. 7 I want to ask you a few questions about 8 featured species. 9 A. Yes. 10 MR. FREIDIN: If I could a moment, Madam 11 Chair. 12 MADAM CHAIR: We will take our afternoon 13 about 2:15, Mr. Freidin. MR. FREIDIN: Okay. 14 MR. MARTEL: Unless you are done before 15 16 then. MR. FREIDIN: You never know. If I can't 17 find that piece of paper I might be. 18
- MR. FREIDIN: Q. Can you turn to Exhibit

 22 2089, please. That's the -- I guess the policy, the

 23 practice. It has a covering letter from Mr. Baker of

 24 January the 28th, 1992.

19

Can you turn, please, to page 4 of the

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MR. O'LEARY: Move your flight up, Mr.

Ţ	report.
2	A. Yes.
3	Q. That's where we have listed Mr.
4	Baker's Mr. Baker has laid out what he describes as
5	four fundamental problems associated with featured
6	species approach.
7	First of all, Dr. Quinney, it is my
8	information that this document was circulated and is
9	intended as a discussion paper only?
10	A. I never said that it was MNR policy.
11	Q. I think maybe you said you weren't
12	able to say one way or the other.
13	A. No. What I tried to say to the Board
14	was that it was fully explained. The purpose of my
15	receiving these, et cetera, et cetera is fully
16	explained in the cover letter which I attached, the
17	memorandum from Dr. Baker which when we entered it as
18	an exhibit I made sure it was attached at the front.
19	Q. So you understand that it was in fact
20	intended as a discussion paper?
21	A. Yes. It is intended to be commented
22	upon by the members of these committees, yes.
23	Q. You found a number of things in it
24	that you found surprising. There are certain
25	statements there that you were cross-examined on by Mr

1 Lindgren and you said if those ideas in there were 2 somehow supposed to be a representation of the 3 Coalition's position they were wrong? 4 Correct, if they were. I did not say 5 they were. 6 Q. You are somewhat familiar with Dr. 7 Euler's evidence in Panel 10? 8 A. It has been a long time, but, yes, I 9 have read excerpts since then. 10 Q. Dr. Euler when he gave his evidence 11 in Panel 10 and talked about where MNR was on that 12 continuum of featured species, indicator species, quild et cetera--13 14 A. Yes. --my recollection is that he didn't 15 0. 16 say that MNR were standing fast with featured species and we were going to look at anything else in terms of 17 wildlife concerns for the 30 per cent that weren't sort 18 of addressed through featured species like moose. 19 Do you recall his evidence being that? 20 A. To that effect, yes, that MNR would 21 consider other approaches. 22 In Panel 16 of the Ministry's case, 23 is it fair for me to say that there were a number of 24 initiatives which were described by Dr. Euler and 25

others, many of which addressed some of the - to use 1 the words in this report - fundamental problems with 2 featured species or the concerns raised in those four 3 paragraphs. 4 You are referring to the various 5 Α. effects monitoring committees that were set up 6 7 including --8 Q. No, I am referring -- sorry. 9 Sorry. Including the population 10 monitoring and habitat inventory ones? 11 Q. Right, and other wildlife program and 12 all of those? 13 The other wildlife program, it is my 14 understanding was originally designed to address the 15 question what are the timber manage -- what are the 16 effects of timber management activities on wildlife 17 species other than moose. 18 Well, do you think that any of the 19 initiatives that the Ministry is engaged on address any 20 of the concerns raised on this page or ... 21 Yes, some of those initiatives are. 22 I want to be sure. Are you 23 advocating these four species, moose, deer, marten, pileated woodpecker, are you advocating them as 24 25 featured species or as indicator species?

1	A. The Coalition is requesting that
2	these four species; that is, two in the boreal forest
3	and two in the Great Lakes/St. Lawrence Forest be
4	featured as described in the Coalition's terms and
5	conditions and my testimony.
6	Q. I understand that the benefit you see
7	in doing that is that they by providing habitat for
8	those we will take one species. If you take marten,
9	that by providing the kind of habitat that marten needs
LO	it will be creating the kind of habitat that other
.1	species can use?
.2	A. That would be one of the benefits.
13	Q. All right.
14	A. In addition to ensuring a continual
15	supply of marten, yes.
16	Q. Is that the primary reason that you
17	are advocating it?
18	I mean, not maintenance of marten, but
19	because you believe it will also produce habitat which
20	will be useful
21 .	A. No, in my witness statement and in
22	responses to interrogatories I have provided very
23.	lengthy explanations for reasons why we have chosen
24	those four species and the purposes for which we have
95	chosen them. There is just not one nurnose. There is

1	more than one purpose and I have gone to great length
2	to explain that.
3	Q. All right. Now, I know the section
4	where you detail you set out some detail of the
5	criteria you used to choose, in fact, these species.
6	Are you referring to that or are you referring to
7	another part of your witness statement?
8	A. No, I'm referring to another part.
9	I'm referring to parts that describe why it's a good
.0	idea to feature certain species and I'm also referring
.1	in particular to my interrogatory response to Forests
.2	for Tomorrow. It was their second last one.
.3	Q. What number?
.4	A. 2087 was the exhibit number and it
.5	was in response to FFT question No. 19 and my response
.6	runs from page 9 to 12.
.7	Q. All right. Let me put it this way.
.8	If you feature marten and marten are doing well, they
.9	are healthy, would you agree that that doesn't
20	necessarily mean that all of the other species that use
21	that kind of habitat are equally healthy?
22	A. Correct, and that's, again, why our
23	featured species approach is just one component of a
24	comprehensive approach.
25	Q. And that the same proposition would

1	apply to the other three species as well?
2	A. Yes. I would like you to look at our
3	proposal as a comprehensive package with a number of
4	elements that can't be separated from one another.
5	Q. I understand, thank you. I know we
6	are going to have a chance to ask you some questions
7	about the analysis that was done which led to a choice
8	of the four featured species set out in your terms and
9	conditions. Has that been finalized yet?
10	MR. O'LEARY: I haven't had a chance to
11	look at it yet today.
12	MR. FREIDIN: All right.
13	Q. I have a copy of the draft. I don't
14	intend to file it, but just to save time for the
15	next when we will spend time and maybe ask you some
16	detailed questions on this, when was this prepared?
17	When was this
18	MR. O'LEARY: That draft, this particular
19	draft?
20	MR. FREIDIN: Q. When was this analysis
21	done?
22	A. The analysis has been ongoing
23	actually for several months.
24	Q. Approximately when did it start?
25	A. Well, it started in association with

us drafting our terms and conditions. 1 In other words, we looked at species then 2 and since that time we have tried to expand that 3 analysis to, in fact, include every single species --4 every single vertebrate species that exist in the area 5 of the undertaking. 6 7 Q. So was part of the analysis then that appears on these pages -- Mr. O'Leary, do you mind if I 8 just let the Board see what we are talking about? 9 10 MR. O'LEARY: Certainly. The final 11 version will generally or almost be identical. I just 12 have to make sure that all of the typographicals have 13 been corrected. 14 MR. FREIDIN: Why don't we just file one 15 as an exhibit and we can replace it with the finalized 16 version. 17 MR. O'LEARY: That's fine, unless the Board thought it would be less confusing if ... 18 19 MADAM CHAIR: Mr. O'Leary, you can just 20 talk to Mr. Pascoe and substitute any subsequent 21 document. 22 MR. O'LEARY: That's fine. 23 MADAM CHAIR: Let's give this an exhibit 24 number. 25 Mr. Pascoe, call I get you to call Mr.

1	Lindgren and give him the exhibit number for this.
2	MR. PASCOE: Certainly.
3	MADAM CHAIR: This will become Exhibit
4	2096.
5	MR. O'LEARY: Madam Chair, I was
6	intending to simply make sure that the typos were taken
7	out and then I was going to serve it on all the
8	full-time parties in attendance. So that might save
9	you the phone call.
10	MR. FREIDIN: I just have one copy.
11	MADAM CHAIR: That's 2096, Mr. Freidin.
12	The title of it is Evaluation of Wildlife Species of
13	the Boreal Forest and
14	MR. O'LEARY: There is a second part
15	starting at
16	MADAM CHAIR: And Evaluation of Wildlife
17	Species of the Great Lakes/St. Lawrence Forest.
18	MR. O'LEARY: That's correct.
19	MADAM CHAIR: The document is 17 pages in
20	length and it is authored by the Ontario Federation of
21	Anglers and Hunters.
22	EXHIBIT NO. 2096: Document entitled Evaluation of Wildlife Species of the Boreal
23	Forest and Evaluation of Wildlife Species of the Great Lakes/St.
24	Lawrence Forest, authored by OFAH consisting of 17 pages.
25	Consisting of 17 pages.

1	MR. FREIDIN: Q. Dr. Quinney, the
2	analysis which was done prior to the formulation of
3	your terms and conditions, does it exist as a separate
4	document?
5	A. No.
6	Q. Do I understand that this particular
7	exhibit then is a product of analysis done both before
8	and after the delivery of your terms and conditions?
9	A. Yes, that when we originally drafted
. 0	our terms and conditions we looked at several species
.1	as potential candidates to be featured and since that
. 2	time, as I said, we have tried to be as absolutely
.3	comprehensive as possible.
. 4	Q. Can you tell me approximately how
.5	many species you looked at before you filed your terms
.6	and conditions as opposed to the total that appear in
.7	this exhibit?
.8	A. In the exhibit I'm pretty sure you
19	will see hundreds of species. I would say in one form
20	or another while we were drafting our original terms
21	and conditions we looked at in some shape or form we
22	looked at probably well, a lot, but not hundreds.
23	Q. Okay. Your terms and conditions
24	haven't changed since the first draft was filed in
25	terms of naming these four species?

1	A. Correct.
2	Q. It has always been these four
3	species.
4	Now, this particular document, it lists
5	at the top, right at the beginning the nine criteria
6	that you used to evaluate the various species and I
7	take that those are the same nine criteria that are
8	listed in your witness statement?
9	A. Yes.
. 0	Q. Okay. You have assigned a number to
.1	each of the species which you see on the left-hand
.2	column, a number from 1 to 5?
.3	A. Yes.
. 4	Q. You give such a rating to each of the
.5	criteria listed?
.6	A. Yes.
.7	Q. What weighting or rating did you give
.8	to the various categories, if any?
.9	And I would just love to say this all at
20	once, what quantitative analytical tool or model was
21	used to weight and rate the various criteria and
22	factors which are set out in this exhibit?
23	A. Yes.
24	MADAM CHAIR: Why does that sound so
5	familiar?

1	MR. FREIDIN: I don't know. I've heard
2	it a lot.
3	THE WITNESS: I don't have it on me now,
4	but beside each of the nine I can provide you with how
5	they were done, how they were scored.
6	MR. FREIDIN: Q. All right. Now, you
7	can provide me with another column which will indicate
8	how they scored?
9	A. No. What I'm trying to say, Madam
10	Chair, is you will notice in Table 6.1 there are the
11	nine criteria and I can provide additional details that
12	we used for each of those inside those nine criteria
13	is what I am saying.
14	MADAM CHAIR: I wouldn't do that unless
15	it is going to be particularly helpful to some point.
16	MR. FREIDIN: It might be helpful. Can
17	we do it this way, Mr. O'Leary.
18	My client hasn't had a chance to look at
19	this and provide me with advice, but if we should
20	require further information - and one of the questions
21	may be is there other information which in fact will
22	provide us a better understanding such as the weighting
23	and rating and that sort of thing - can we sort of just
24	submit them to you in writing as opposed to an
25	interrogatory and deal with it on that basis?

1	MR. O'LEARY: All right. Well, subject
2	to seeing what they are and to determine how onerous
3	their request is that probably will be satisfactory.
4	MR. FREIDIN: Okay. You should have seen
5	some of the interrogatories that we got.
6	MR. O'LEARY: We didn't have 22 months to
7	present our case.
8	MR. FREIDIN: We didn't either.
9	MADAM CHAIR: Shall we adjourn for the
10	afternoon break, Mr. Freidin?
11	MR. FREIDIN: It will be a good time. We
12	will finish.
13	MADAM CHAIR: Good.
14	MR. FREIDIN: What time would you like to
15	be out of here, Mr. Martel?
16	MR. MARTEL: Do you want the truth?
17	MR. O'LEARY: A year and a half ago.
18	MR. FREIDIN: We will be done.
19	MADAM CHAIR: We will be back in 20
20	minutes.
21	Recess at 2:15 p.m.
22	On resuming at 2:35 a.m.
23	MADAM CHAIR: Please be seated.
24	Mr. Freidin?
25	MR. FREIDIN: Q. Dr. Quinney, in

1	responding to Dr. Euler's evidence where he set up a
2	continuum
3	A. Yes.
4	Qwhen that was put to you he asked
5	where did your proposal, the Coalition's proposal fit
6	into that. That was asked by Mr. Lindgren. I think
7	you said that you couldn't fit anywhere into that and
8	you said, we are putting forward a composite of
9	wildlife management techniques were your words.
10	A. Yes, wildlife habitat management
11	techniques.
12	Q. Wildlife habitat management
13	techniques. Can I assume that your featured species
14	terms and conditions fall into do they fall into
15	that category?
16	A. They are related to that.
17	Q. You use the word wildlife habitat
18	management techniques, would you would it be
19	properly characterized if we said you were putting
20	forward a composite of wildlife habitat management
21	suggestions, proposals?
22	A. They are proposals.
23	Q. All right. I just changed the word
24	techniques to proposals. You are putting forward
25	proposals in relation to wildlife habitat management,

1	let's put it that way?
2	A. Yes, that involves certain
3	techniques.
4	Q. Okay. Now, the Board has heard a lot
5	about planning processes and timber management planning
6	processes.
7	If, in fact, there was only one featured
8	species in Ontario and it was moose, I take it that you
9	would want the planning process that ultimately gets
.0	described in the Board's decision to be one where moose
.1	habitat would be provided; is that correct?
.2	A. You are putting a hypothetical to me
.3	because, again, at the very end of the day yesterday we
4	were requesting that the Board consider this a
.5	composite, a package.
.6	Q. My question is a hypothetical. If
17	you only had one featured species in Ontario; in other
18	words, if that was all that there was going to be, you
L9	would want the timber management planning process, as I
20	understand it, to be one where you could in fact use
21	timber management activities to provide forest
22	structure for that particular species?
23	A. Yes.
24	Q. And if a decision was made, say, by
25	the wildlife branch that they wanted two and they added

one, you would want the timber management planning 1 process to be one which could accommodate that as well 2 in terms of dealing with forest structure? 3 A. Yes. 4 If the wildlife management branch Q. 5 decided as part of their wildlife management that they 6 wanted to have four featured feature species and they 7 were moose, white-tailed deer, pileated woodpecker and 8 marten, you would want the timber management planning 9 process to be one which could accommodate those four in 10 11 terms of providing forest structure, is that correct? 12 A. You are losing me somewhat, Mr. 13 Freidin, in the sense that, again, what the Coalition is requesting is these featured species in the context 14 15 of timber management. A method of integrating wildlife 16 habitat with timber management plans. 17 Q. Okay. I don't want to spend too long 18 I know you are going to deal with it in Panel 19 9, but it arose again here, the public input and this 20 whole question of what role does the public have on the 21 management unit and what role they don't. 22 I just want to deal with it briefly here 23 because you were asked by Mr. Lindgren about who makes

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certain decisions about biodiversity and I can just

tell you I was looking at Forests for Tomorrow 11(a).

24

1		A. Interrogatory?
2		Q. Yes, Forests for Tomorrow 11(a). Do
3	you have that	one?
4		A. Yes.
5		Q. This is about old growth and in (a)
6	you were asked	i:
7		"For each working group in Ontario please
8		specify the definition of old growth that
9		would be supported by the witness."
10		You said:
11		"I don't agree with defining old
12		growth by working group. I want to use
13		FEC types. It is the much preferred
14		basis"
15		You go on and talk about how that old
16	growth you	say:
17		"Old growth" in third line,
18		"is addressed by the specification of
19		rotation age and age classes for
20		individual FEC types."
21		A. Yes.
22		Q. You go on in the last three lines of
23	the answer:	
24		"These decisions are proposed to be made
25		at the local FMU level through public

1		consultation, ecological information in
2		the FEC manuals and ecological
3		information on the local state of the
4		forest."
5		That question was asked in the context of
6	old growth.	You were asked similar sorts of questions
7	about your bi	odiversity, particularly by the Ministry
8	of Natural Re	sources in interrogatory 6(a), and in 6(a)
9	the question	was:
10		"The advantage of this approach"
.1		Pardon me, your witness statement said:
.2		"The advantage of this approach managing
13		biodiversity using the adaptive
14		management approach and management by
.5		objective would provide the highest level
16		of assurance that the optimum level of
17		biodiversity can be maintained in each
18		forest management unit."
19		And in answer to question (a) as to what
20	the optimum 1	evel meant, you said:
21		"Optimum level in this context would be
22		the desired level chosen by the public
23		once the consequence of alternative
24		levels were clearly presented."
25		In MNR No. 7 you were asked in terms of

Τ	the oldest seral stage, 7(a):
2	"What criteria are used to define the
3	oldest age class in each FEC site type?"
4	You answered:
5	"The criteria and resulting decisions are
6	proposed to be made at the local FMU
7	level through extensive public
8	consultation."
9	Leaving aside whether it would be
10	difficult or not to get the public involved in that
11	kind of an exercise, it still seems to suggest that
12	those decisions are still being made at the local
13	level.
14	Can you just give me some hint as to the
15	role that these higher level objectives play, if any,
16	in terms of limiting the choices available to the
17	people at the local level now in relation to choosing
18	the oldest seral stage, choosing the rotation age or
19	defining age class for the purposes of old growth?
20	A. Mr. Freidin, as I explained to Mr.
21	Lindgren, I don't have my Panel 9 information with me.
22	I would like to give a thorough answer to that, but I
23	don't think I'm in a position without those materials
24	to do that.
25	Q. Are you in any position to say

1	whether there are any constraints on them at all?
2	Are we going to hear that there are some
3	limits on their choices?
4	A. Yes.
5	Q. All right.
6	Q. I will save the rest of my questions
7	until I hear how this all fits together.
8	There was a discussion I think between
9	you and the Board about population targets for various
. 0	wildlife species in timber management plans. There was
.1	a discussion about how the public might react to a
.2	target, specific target in the plan and whether you
.3	could really suggest to them that you could deliver a
. 4	certain number and then you responded by: Well, maybe
.5	a range of populations would be more appropriate.
.6	A. Plus or minus.
.7	Q. Plus or minus, sure.
L8	You have also suggested that whether it
19	is an actual number or a number plus or minus, all
20	right, you are saying that that sort of non-timber
21	objective should be in the timber management plan as
22	something that you are trying to achieve on the forest
23	management unit?
24	A. Yes.
25	Q. Okay. Now, I have asked your counsel

1 to provide you with a copy of Exhibit 1781. 2 Were you able to do that, Mr. O'Leary? 3 THE WITNESS: Which is? 4 MR. O'LEARY: There are a number of 5 exhibits over there. 6 MR. FREIDIN: Q. That exhibit is a 7 certain portion of Part 3 of the Federal Register. It 8 is actually 36 CFR Part 219 dated February 15, 1991. 9 It outlines proposals being made in the 10 United States for amendment to the regulations under 11 the National Forest Management Act. Do you have those? 12 I have it in front of me. Α. 13 0. Could you turn to page 6526. This moment is the first time I've 14 ever seen this document. 15 Q. All right. We certainly don't need 16 the whole document. 17 MR. O'LEARY: Just so we are clear, you 18 requested counsel to produce that document this 19 20 morning. MR. FREIDIN: Yes. 21 MR. O'LEARY: All right. 22 MR. FREIDIN: Q. So the top of the page 23 talks about the definition of viable populations? 24 Those are the first words on the left-hand side, just 25

1	to make sure we are at the same spot:
2	A. Definition of viable population.
3	Q. Okay. Now, this particular section
4	is, on this side of the page, the first column
5	describes how viable populations at the time of this
6	document, February of '91, how viable population were
7	defined and indicates how a change in that is being
8	suggested and you will note that looking at the
9	beginning it says that:
. 0	"The definition of viable populations"
.1	A. Population.
. 2	Q. "population" sorry,
.3	"varies from the definition described
.4	in the existing regulation."
.5	So he is talking about the proposed one.
. 6	The definition of viable population in the existing
.7	regulation states that:
.8	"The viable population shall be regard as
.9	one which has the estimated numbers and
20	distribution of reproductive individuals
21	to ensure its continued existence is well
22	distributed in the planning area."
23	Would you, please, assume for purposes of
24	my question that the planning area means the national
25	forest, the geographical area of the national forest

1	under managem	ent.
2		It goes on well, I will just read the
3	whole thing.	
4		"The preliminary regulatory text would
5		modify that definition to better address
6		biological considerations. With the
7		existing definition, individual national
8		forests are the spacial units within
9		which viability must occur. Planning
10		difficulties have been encountered with
11		this requirement. Some species have
12		have populations whose space needs often
13		include more than one national forest.
14		For these species it is impossible to
15		have viable populations on each national
16		forest. The current definition does not
17		clarify intent for these cases.
18		The new definition" defined at the
19	paragraph ind	icated,
20		"which say a viable population is
21		and they reproduce the same thing and
22		indicate that it is a population whose
23		estimated number and distribution of
24		reproductive individuals provides a high
25		likelihood of continued existence

1	generally" and they have put in the
2	words "throughout its current range."
3	"Current range becomes a spacial unit for
4	population viability and the problem of
5	populations whose space needs include
6	more than one national forest would be
7	overcome.
8	By making home range the space where a
9	population is difined, its administrative
10	boundaries would become unimportant in
11	defining viability."
12	Just dropping down to the last few lines
13	of that paragraph:
14	"This definition generally would require
15	existing population distribution but
16	would allow reduced population
17	densities."
18	Now, the rationale which is set out there
19	is saying national forests I am suggesting to you is
20	saying are arbitrary boundaries, they don't necessarily
21	have any particular relationship to range of animals
22	that you may want to control the population of.
23	. I would suggest to you that forest
24	management units are exactly the same thing. They were
25	put there some time ago for the purposes of licensing

1 timber companies. They weren't put there for the 2 purposes of defining geographical areas within which 3 population targets would be set. 4 First of all, do you agree with my last 5 comment that forest management unit boundaries were not established based upon areas in which people thought 6 7 that you would be able to set population targets for wildlife? 8 9 I think you are posing me several A. 10 questions. 11 Q. That's why I went went back and posed 12 one question. 13 A. The question is, do I agree that FMU boundaries were set for ... 14 Q. Wildlife management purposes. 15 A. No, they weren't set for wildlife 16 management purposes, but that doesn't mean that in fact 17 we can't manage, for example, habitat within FMUs 18 19 because we can. Q. I am not talking about habitat. I am 20 talking about population targets which you and the 21 Chair had a discussion about it. 22 Would you agree, sir, that what you are 23 proposing in terms of having a population target, 24

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whether it is an exact number or within a range,

1	wouldn't you agree that what you are proposing in
2	relation to population targets in timber management
3	plans is exactly what this recommendation in the United
4	States is trying to get away from?
5	A. I couldn't agree with that.
6	Q. Why not?
7	A. Well, No. 1, as I said this is the
8	first time I have seen the document and I haven't been
9	able to place your comments totally necessarily in
10	context.
11	Q. Okay. Let's assume that I haven't
12	taken in it out of context. Let's assume that what the
13	words say is all there is.
14	I mean, your counsel in argument or
15	somebody can suggest I have taken it out of context,
16	but for you to satisfy yourself you would have to read
17	the whole document and everything.
18	So let's assume for the purpose of my
19	question that what we have just reviewed together is
20	all there is, that that is an accurate reflection of
21	the intent of the change. Wouldn't you agree that your
22	proposal for population targets in timber management
23	plans goes against the rationale which is driving this
24	change or this suggested change?

A. I don't think so necessarily.

1	Q. But this is saying, let's not have
2	population targets, viable population targets, if I can
3	put it that way, on the national forest on their forest
4	management units because that's got no relationship to
5	the range of the animals we are trying to control the
6	population of.
7	In other words, you are saying I want to
8	do that here in Ontario on the forest management unit?
9	A. I don't think so, Madam Chair. I
.0	think again what Mr. Freidin has been reading me is
11	concerning viable populations and he is mixing in
12	whether it is possible to set population targets at the
13	FMU level and I can't agree with his statements.
4	Q. Would you agree that moose okay.
15	I am almost finished.
16	Can you turn to the interrogatory for
17	OFIA, No. 8, please. Just let me know when you have
18	got that.
19	MADAM CHAIR: That's page 27 of Exhibit
20	2087.
21	MR. FREIDIN: Thank you.
22	Q. Do you have that, Dr. Quinney?
23	A. Yes, but I wanted to orientate myself
24	with reference to the context within which that
5	question was posed in my witness statement, if I may.

1	Q. Sure. May I should put the question
2	to you first so it might make it easier to answer.
3	I am just interested where you say the
4	number of samples we asked about monitoring:
5	"Please provide an estimate of the
6	'large' number of sample sites necessary
7	to do the monitoring discussed in the
8	answer to this question."
9	Part of your answer in the second
10	paragraph indicated:
11	"The number of samples per FMU will
1.2	depend upon other things"
13	And then No. 2:
L 4	"The number of FEC types and seral
1.5	stages"
1.6	And 3:
17	"Range of silvicultural treatments
18	employed"
19	And 5:
20	"Level of observed variation and stand
21	response to silviculture treatments."
22	You when you say that the number of
23	samples per FMU would depend upon things such as item
24	3, the range of silviculture treatments employed, are
25	you suggesting that the number of FEC types that you

1	might have is somehow going to be affected by the rage
2	of silvicultural treatments employed?
3	A. Not the number.
4	Q. What's affected then by the range of
5	silvicultural treatments employed which is going to
6	have an effect on the amount of monitoring you have to
7	do?
8	A. Well, we are interested in what is
9	happening to the FEC type as a result of timber
10	management activities. So we are monitoring at the
11	FMU level and we are comparing those results to results
12	that would be obtained by monitoring FECs not subject
13	to timber management activities.
14	Q. I'm sorry, can you just go over that
15	again for me?
16	A. Yes, the context of this question was
17	we have stated that:
18	"Long-term monitoring plots must be
19	established to determine forest ecosystem
20	response over the long-term. Natural
21	stands not subject to timber management
22	activities must also be monitored to
23	provide a comparative basis to interpret
24	long-term trends."
25	We know that there is a high degree of

1 variability within the area of the undertaking. Because of that high variability a large number of 2 3 samples sites is going to be required. Q. If you have that kind of variability 4 5 as a result of the silvicultural treatments that they 6 are applying and you have to do research projects in 7 relation to it, how can you so confidently believe that 8 when something starts at age zero after harvest that it 9 is going to end up in a certain way -- the same FEC 10 back at maturity? 11 A. Well, the timber management 12 activities are going on and we are simply saying as 13 those activities continue monitoring is necessary in both situations where activities are occurring, where 14 15 they are not occurring, so we can determine if there is 16 any adverse impacts. 17 Q. Okay. 18 MR. FREIDIN: Just one moment. Those are 19 my questions, Madam Chair. 20 MADAM CHAIR: Thank you very much, Mr. 21 Freidin. 22 Thank you, Dr. Quinney. We will -- oh, 23 we have got re-examination. Sorry, Mr. O'Leary. 24 -MR. O'LEARY: I know the plane is

25

waiting.

1	MR. O'LEARY: Madam Chair, I just have a
2	couple of very short questions. I don't think we need
3	a break, and perhaps Mr. Freidin could stay here so I
4	can see him this time rather than just hear him.
5	RE-DIRECT EXAMINATION BY MR. O'LEARY:
6	Q. I want to go to Exhibit 2095, Mr.
7	Quinney.
8	A. Which is?
9	Q. Which is the paper that Mr. Freidin
10	introduced in evidence and cross-examined you on. It
11	is Using Forest Ecosystem Classifications to Facilitate
12	Habitat Inventory.
13	A. Yes.
14	Q. It is the one that's authored in part
15	by Mr. Racey who, I understand, is over on my left?
16	A. Yes.
17	Q. Can you tell me, first of all, do you
18	know what Mr. Racey what his qualifications are?
19	A. No, I don't.
20	Q. All right. I don't know if Mr.
21	Freidin wants to enlighten us on that, but do you know
22	which department with the MNR he is employed?
23	A. Not off the top of high head, no, I
24	don't.
25	Q. I guess if I suggest to you he is a

1	wildlife biologist would that be correct?
2	A. I believe Mr. Racey is.
3	Q. All right. Can I ask you to turn to
4	page 3 of that document, the fourth paragraph.
5	A. Four.
6	Q. I will just read it to you. I just
7	wonder what this means to you. It says:
8	"A forestry consultant was retained to
9	develop an FRI/FEC relationship."
10	Can you tell me what that indicates to
11	you in terms of the contribution Mr. Racey made in
12	respect of that very paragraph which you were
13	cross-examined on?
14	A. Well, in terms of that particular
15	paragraph, clearly the data and results the process
16	was not carried out by the authors of the paper. It
17	was carried out by a forestry consultant.
18	Q. Are you a forestry consultant?
19	A. No, I'm not.
20	Q. Okay, thank you. Are you a wildlife
21	biologist?
22	A. Yes, I am.
23	Q. Thank you. Just a couple of things
24	that I would like your comments on. Page 2 under the
25	subheading Mapping, it reads:

1		"Bot	th manual and computer mapping
2		prod	cedures may be effectively employed
3		for	FEC information. One of the most
4		effe	ective mapping procedure involves the
5		anno	otation of FRI polygons on existing
6		maps	s or on a GIS system."
7		Can	you tell me, what does that say to
8	you? What do	es th	nat mean to you?
9		A.	That there are mapping procedures
. 0	available.		
.1		Q.	All right. Just a little further
. 2	down under In	corpo	oration Into Management Planning, it
.3	reads:		
. 4		"The	e FEC is well suited for the
.5		deve	elopment of silvicultural groundrules
.6		and	the description of site for
.7		silv	vicultural research and adaptive
.8		mana	agement."
.9		Can	I ask you, what does that mean to
20	you, Dr. Quin	ney?	
21		A.	Well, clearly it means that the FEC
22	system is ver	y efi	fective.
23		Q.	Turning over to page 4, first
24	paragraph, se	cond	last sentence, it reads
25		A.	Sorry, page 4?

Qui	nne	Y	
re	dr	(0'	Leary)

1	Q. Top paragraph, second last sentence:
2	"The production of this algorithm did
3	indicate, however, that an FRI/FEC
4	relationship could be produced."
5	What does that say to you, Dr. Quinney?
6	A. "The production of this algorithm did
7	indicate, however, that an FRI/FEC
8	relationship could be produced."
9	That is, FRI can be enhanced with FEC.
10	It can be done. In other words, they are saying it can
11	be done and it is being done.
12	Q. Does that have any relationship to
13	the evidence you gave in-chief and in your witness
14	statement?
15	MR. FREIDIN: Well, I mean
16	THE WITNESS: Yes, it does.
17	MR. FREIDIN: Hold on.
18	MR. O'LEARY: I'm sorry, it is a new
19	document.
20	MR. FREIDIN: No, no. He is asked to
21	clarify and comment on the document, and I have got
22	some question about that, but whether it has got some
23	relevance to his other evidence, that's a matter for
24	argument.
25	MR. O'LEARY: I will move on. We heard

1 the answer in any event. 2 Q. The last paragraph on page 5, Dr. 3 Quinney, reads: 4 "The expected time frame for this work is 5 two years with the cost of \$50,000 to 6 produce and test a northwestern FEC..." 7 logarithm. 8 MR. FREIDIN: Algorithm. 9 MR. HANNA: Algorithm. 10 MR. O'LEARY: Algorithm, sorry. I left 11 math in Grade 13. 12 Q. Can you tell me, what does that 13 paragraph say to you, Dr. Quinney? 14 MR. FREIDIN: Madam Chair, I am just wondering, the witness indicated that he couldn't even 15 understand this document. He didn't even know what it 16 17 was talking about. MR. O'LEARY: He couldn't understand some 18 of the questions you were asking in respect of it 19 because you need a forestry consultant. You gave him 20 the document. If I had seen it I would have produced 21 it as our exhibit. 22 Q. Dr. Quinney, can you provide your 23 final comment in respect of the last paragraph on page 24

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5.

1	A. My final comment would be it is my
2	understanding that the paper was produced in 1990.
3	Expected time frame for this work is two years to
4	produce and test it. It may very well have been done
5	and complete as of today.
6	Q. Right. Is there any relationship
7	between that comment and your evidence?
8	A. Yes, there is because I have said
9	that these technologies are available and can be used
10	tomorrow.
11	MR. O'LEARY: Thank you. That is all the
L2	re-examination.
L3	MADAM CHAIR: Thank you, Mr. O'Leary.
L4	Thank you, Dr. Quinney.
15	THE WITNESS: Thank you, Madam Chair.
16	MADAM CHAIR: We are finished with two
17	outstanding undertakings. I think we have finished
18	with the Coalition's Panel 6 evidence and we will be
19	recalling you to speak to Exhibit 2096 some time around
20	your appearance for Panel 9. Thank you very much.
21	THE WITNESS: You're welcome, Madam
22	Chair.
23	MADAM CHAIR: What week do we have
24	scheduled now
25	MR. FREIDIN: Do we have scoping for 8 or

1	is that next week?
2	MR. O'LEARY: We are doing 8 and 9 on
3	Monday and Wednesday.
4	MADAM CHAIR: Of the week after next.
5	MR. O'LEARY: Not next week. The week
6	after next.
7	MADAM CHAIR: There was some confusion
8	about that. Panel 8 will be scoped on February the
9	19th no, the 17th and then Panel 9 will be scoped on
10	February 26th because the statements of issue are due
11	on the Monday the 24th.
12	We will see you back here a week Monday
13	at 10:30. Thank you.
14	
15	Whereupon the hearing was adjourned at 3:15 p.m., to be reconvened on Monday, February 17th, 1992
16	commencing at 10:30 a.m.
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